LC
1041
A3
V33
1958

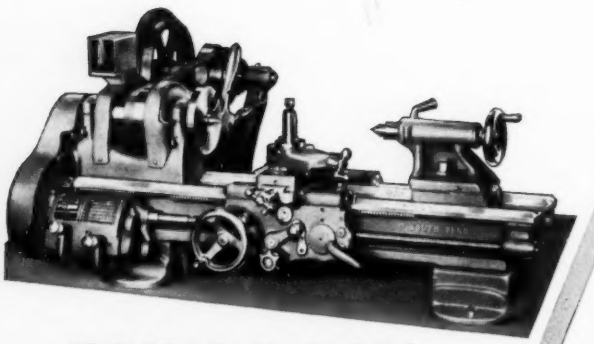
American VOCATIONAL Journal

January, 1958

Serial Dept.
JAN 20
MSU

The Journal Salutes WYOMING

SIMPLE . . PRACTICAL . . DURABLE



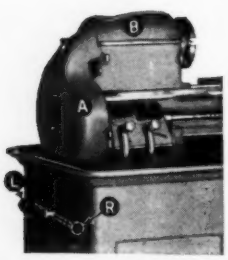
9" Model A Precision Bench Lathe

—12-speed drive, less electrical equipment, f.o.b. factory—$466. Other 9" Lathes from $280.

10-K Model A Precision Floor Lathe

—metal column base, underneath motor drive, less electrical equipment, f.o.b. factory—$897. Other 10-K Lathes from $388.

SOUTH BEND LATHES



Exclusive Safety Feature

Only South Bend 9" and 10-K Lathes with Underneath Motor Drive have this patented automatic safety interlock which prevents opening of gear guard "A" or headstosk cover "B" unless belt tension lever "L" is moved to position 'R" which disengages the motor drive.

The simplicity of South Bend 9" and 10-K Lathes has made them popular with both students and instructors. It opens the way to quick development of handling skill which means less work spoilage and student supervision.

Their practical design provides safety features that reduce the possibility of student injuries or equipment damage. These precision lathes, constructed for industrial production work, can withstand student usage with a minimum of maintenance.

Mail the coupon for complete information on how you get more for your money in South Bend Machine Tools—in every way.

SOUTH BEND LATHE, SOUTH BEND 22, IND.

Send information on_____9" Lathes,_____10-K Lathes, _____10" to 16-24" Engine and Toolroom Lathes,_____Turret Lathes,_____Milling Machines,_____Shapers,_____Drill Presses,_____Pedestal Grinders.

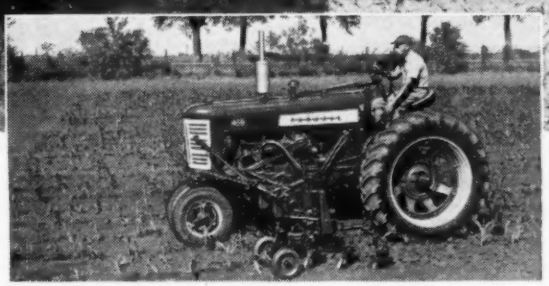
Name_____

Address_____

Street_____ City & State_____

Every day . . . in all these ways . . .

speed through more work with TA



You'll save minutes and movements on every turn when you cultivate with TA. Just pull the TA lever to slow down 30% for safer, full-power turns, then release the TA lever to resume top cultivating speed.

Pull TA lever to take bunchy windrows in stride. TA reduces forward travel instantly, yet keeps pto machines at full-rated rpm to handle sudden overloads. There's no clutch slippage, no loss of efficiency, no fuel waste.

Name any job—plowing, planting, cultivating, baling, hauling! You can do it faster, easier, at lower cost with *exclusive* IH Torque Amplifier drive on a new Farmall® or International® tractor.

TA is the big difference that puts IH tractors in a class by themselves! Ten speeds forward—two in each gear—match every job, hurry all work. TA gives you instant pull-power increase of up to 45% that keeps you going *non-stop* when others must shift.

From winter chores through fall harvest, Torque Amplifier drive puts IH tractor power to better use.

See why you're a BIGGER MAN on a new IH TRACTOR!

Your IH dealer will gladly demonstrate Torque-Amplifier, Traction-Control Fast-Hitch, Hydra-Touch hydraulics, and all other IH features.

SEE YOUR

INTERNATIONAL HARVESTER DEALER

International Harvester Products pay for themselves in use—Farm Tractors and Equipment . . . Twine . . . Commercial Wheel Tractors . . . Motor Trucks . . . Construction Equipment—General Office, Chicago 1, Illinois.

STILL AVAILABLE

Be sure to order your copies of the December American Vocational Journal—Golden Anniversary Issue—while the supply lasts. The Journal's record of 50 years of progress in vocational and practical arts education is an exclusive reference for use through the years ahead.

Order today from AVA!

$1 each; 10 per cent discount on orders over 9

Your Headquarters for Wood and Metal Shop Supplies

The oldest...and most reliable . . . firm in the School Shop Supply Field.

PATTERSON [PB] BROTHERS

15 PARK ROW NEW YORK 38, N.Y.

YOUR MOST DEPENDABLE SOURCE SINCE 1848

Send Today for McKnights Big, New

FREE CATALOG

describing dozens of classroom tried and tested

SHOP BOOKS

WRITTEN FOR CRAFTSMEN BY CRAFTSMEN WHO TEACH

A FEW OF THE SUBJECTS COVERED

- LEATHERCRAFT
- SILK SCREEN
- CERAMICS
- LINOLEUM BLOCK PRINTING
- METAL ETCHING
- WOODWORKING
- PHOTOGRAPHY
- WOOD CARVING
- GLOVEMAKING
- PLASTICS
- WEAVING
- BOOKBINDING

Projects in metals, woodwork, electricity & teaching industrial arts & vocational subjects. America's most popular shop books for school text use. New catalog gives complete listing of these interesting, easy-to-read and understand shop books, all profusely illustrated with "hands at work" photos and drawings.

.....Clip this coupon .....

McKnight & McKnight Publishing Co.,
Dept. 519, Bloomington, Illinois

Send me your big, new catalog today!

Name _____

School _____

Address _____

City _____ State _____

RIDER BOOKS ARE THE KEY TO MORE EFFECTIVE INSTRUCTION . . . BETTER STUDENTS!

Rider books are now proving themselves effective educational tools in many of the nation's school systems. Here are just a few—

Fabulous "Picture Book" Courses . . .

BASIC ELECTRICITY—BASIC ELECTRONICS
by Van Valkenburgh, Nooger & Neville, Inc.
Over 25,000 Navy trainees have already learned Basic Electricity and Basic Electronics this easy "Picture Book" way! Now, for the first time, the basics of Electricity and Electronics as "Learn-by-Pictures" training courses are available to schools. Over 1,700 simple, easy-to-understand drawings actually make up more than half the entire material! No other Basic Electricity or Basic Electronics courses in America use this revolutionary illustrative method. Basic Electricity and Basic Electronics already are adopted texts in many schools throughout the nation.

BASIC ELECTRICITY
#169 Soft Cover: 5 volumes, 624 pp. $10.00
#169-H Cloth Bound; all 5 volumes in a single binding $11.50

BASIC ELECTRONICS
#170 Soft Cover: 5 volumes, 550 pp. $10.00
#170-H Cloth Bound: all 5 volumes in a single binding $11.50

ADVANCED TV SERVICING TECHNIQUES
by Zbar and Schildkraut
A complete advanced TV servicing course, developed by the Radio - Electronics - Television Manufacturers Association. Shows how to use every conceivable type of test equipment, how to service every part of a TV receiver. Explains latest techniques. Soft cover, 8½x11"
MAIN TEXT, 192 pp., illus.
#161 ..... $3.60
LABORATORY WORKBOOK, 32 pp.
#161-2 ..... $ .95
INSTRUCTOR'S GUIDE: Available to schools only, at no charge.

35mm. FILM STRIPS
Dramatic VISUAL AIDS, actually produced from the artwork appearing in this widely-acclaimed course. Strip #1: 43 frames, showing "faulty" picture tube patterns. #FS161 ..... $4.00
Strip #2: 115 frames, showing every single illustration in the Main Text. #FS161-2 ..... $11.00

35mm. FILM STRIP: 50 single frames, teaching trouble diagnosis and recognition in **HORIZONTAL AFC-OSCILLATOR CIRCUITS** in television receivers. Complete with instructor's Synopsis.
#FS1680 ..... School Price $5.95

A New Course in

BASIC TELEVISION
by Dr. Alexander Schure
A 5-volume "picture book" course teaching the elementary principles and practices of black and white television easily, quickly and understandably. Every page covers one complete idea, and there's at least one big illustration on that same page to explain it. Each volume covers a specific number of sections in the receiver. The presentation is like a spiral—first an overall view of the whole, and then a detailed explanation of each part; perfect for maximum understanding.
#198 Soft Cover, 5 vols., 6x9", per set $10.00
#198-H Cloth Bound, all 5 vols. in a single binding $11.50

TELEVISION—HOW IT WORKS (2nd Edition)
by J. Richard Johnson
A completely rewritten, up-to-the-minute edition of an authoritative and informative book. It is the newest and most comprehensive text on the subject, and follows the progress of the received signal from the antenna to the picture tube and loudspeaker. Leather Finish MARCO Cover. 352 pp., 5½x8½", illus.
#101 ..... $4.60
#101-H Cloth Bound $5.50

REPAIRING TELEVISION RECEIVERS
by Cyrus Glickstein
The most modern completely practical book, written by an expert with long experience in television receiver repair. Devoted to troubleshooting and repair techniques which are modern, yet down-to-earth. Profusely illustrated. Soft cover, 212 pp.
#191 ..... $4.40

RADIO OPERATOR'S LIC. Q & A MANUAL, 6th Ed.
by Milton Kaufman
Represents all revisions and question renumbering made by the FCC to date. The most modern version of the "standard" text used in the best schools teaching radio operating for all classes of licenses.
#130 Cloth Bound, 736 pp. $6.60

A New Physics Text With a New Teaching Approach . . .

BASIC PHYSICS
by Alexander Efron, E.E., Ph.D.
These thoroughly readable textbooks (2 volumes) comprise a psychologically organized course in intermediate physics. Volume I gives an overall view of most of the simpler material of the standard course. Volume II offers more difficult topics, as well as a "deeper look" at those topics which had been previously presented, in a descriptive and empirical fashion.

Thus, the student is first given a glimpse of the "whole", and as he gains maturity, is returned to the consideration of "parts" which he then reassembles into his own more meaningful pattern. The resulting spiral widens gradually until the final approach becomes fully mathematical and analytical.

Volume I is non-mathematical. Volume II is mathematical at the intermediate level. The two volumes constitute a year's course. Special attention has been given to the selection and execution of each illustration. The texts are rigorously correct technically, yet maintain interest. Basic demonstration experiments are described, and model problems are set up and solved. The historical development of every important physics principle is presented. The study of both volumes fully satisfies the requirements of the College Board as well as all local, regional and State syllabi.
#198, Cloth Bound, approx. 720 pp., 6½x9¼", illus. List Price $7.60.

An Outstanding Text On Practical Mathematics . . .

ARITHMETIC FOR ENGINEERS (5th Ed., Revised)
by Charles B. Clapham
This text covers practical elementary mathematics for students in vocational schools studying mechanical drafting, tool and die making, shop machining, shop mechanics, etc. A leading educational magazine says, ". . . clear, concise, easy to follow, and remarkably understandable . . . The whole field of practical mathematics is explained . . ." More than 390 numerical examples of solutions fully explained. More than 1,950 problem exercises, with answers.
#183 Cloth Bound, 588 pp., 5½x8½", illus. . . $6.50

SEND FOR 30-DAY APPROVAL COPIES—SPECIAL SCHOOL DISCOUNTS APPLY. Send for Free Catalog.
AVJ—1

JOHN F. RIDER PUBLISHER, INC. 116 WEST 14th STREET NEW YORK 11, N. Y.

American VOCATIONAL Journal

M. D. Mobley, Editor-in-Chief

Dorothy Robinson Thompson, Managing Editor
Eleanor Brooke, Editorial Assistant

AVA EDITORIAL BOARD

Agriculture—George P. Deyoe, University of Illinois
Business—William Selden, Pennsylvania Department of Public Instruction
Distributive—Wendell Echols, Florida Department of Education
Home Economics—Margaret Scholl, Texas Education Agency, Austin
Industrial Arts—G. Harold Silvius, Wayne State University, Detroit
Trade & Industrial—Russell K. Britton, Denver Board of Education

National Advertising Representatives

Eugene L. Pollock, 40 E. 40th St., New York 16
Joseph Mervish, 6716 Gentry Ave., North Hollywood
John Cockerell, 360 N. Michigan Ave., Chicago

Vol. 33—JANUARY, 1958—No. 1

The COVER

The *Journal* salutes Wyoming, often called "the equality state" because women were given the right to vote there in 1869—one year after the area was organized as a territory and 51 years before women could vote generally in the U. S.

A region of natural grandeur and the scene of a colorful drama in American development, Wyoming has met unique educational needs in providing schools for citizens who are scattered over vast distances. Today, it has one of the highest national percentages of persons who can read and write.

Vocational education has had an important role in Wyoming's social and economic growth. Be sure to read all about it, pages 8-13.

And we wish to acknowledge, with appreciation, Wyoming's contribution of color plates for this month's cover. In addition, Wyoming will meet the additional cost of 4-color printing.

AVA Officers

President—R. E. Bass, Virginia Department of Education
Past President—Eva W. Scully, Arizona Department of Education
Executive Secretary—M. D. Mobley, 1010 Vermont Ave., N.W., Washington, D. C.
Treasurer—Charles W. Sylvester, 6429 Blenheim Rd., Baltimore

Vice Presidents

Agriculture—Carl M. Humphrey, Missouri Department of Education
Business—Margaret Andrews, Minneapolis, Minn., Public Schools
Distributive—Roy Fairbrother, Wisconsin Dept., Voc'l and Adult Educ.
Home Economics—Dorothy S. Lawson, New York State Education Dept.
Industrial Arts—William R. Mason, Cleveland Board of Education
Trade and Industrial—Samuel L. Fick, California Department of Education

The American Vocational Journal is published monthly, September to May, inclusive, by the American Vocational Association, Inc. Entered as second class matter at the Post Office at Washington, D. C., under Act of March 3, 1879. Contents copyright by AVA.

The Journal for January

SPECIALS

Guest Editors, *Velma Linford, M. L. Simpson, Sam Hitchcock* 8
The Journal Salutes Wyoming 9
The Multiple Values of Homemaking Education *by Mrs. Marie C. Moffitt* 14
Treasurer's Report, 1957 *by Dr. Charles W. Sylvester* 16
How Vocational Agriculture Serves in Iran *by Jess S. Smith* 18
T & I and Industrial Arts: a Comparison *by Arthur J. Wrigley* 20
Creative Selling *by Grant L. Clarke* 24
Theories of Industrial Arts Education *by Howard O. Reed* 25
American Technical Society Honors Six 31

REGULARS

Comment 4
Latest Word from Washington *by Dr. M. D. Mobley* 5
Applause 7
From the U. S. Office 26
Association News 27
Around the Nation 28
New Books 32

All members of the American Vocational Association, Inc., receive the Journal; 25 per cent or more of membership dues reserved for Journal. Membership applications should be submitted through state vocational association secretaries. Order library and nonmember subscriptions at $3.00 a year from AVA, 1010 Vermont Ave., N.W., Washington.

OFFICIAL AVA PINS

Incorporating the AVA seal, this handsome pin (or lapel button), identifies you as a member of your professional organization.

$1.25 each. Make checks payable to the American Vocational Association.

AVA
1010 Vermont, N.W.
Washington 5, D. C.

COMPLETE SCHOOL PRINT SHOP MACHINERY & SUPPLIES
•
ZIMMER PRINTERS SUPPLY
70 Beekman St. New York, N. Y.

KNOCKED DOWN CEDAR CHEST

LUMBER & VENEER
► WRITE FOR FREE PRICE LIST
GILES & KENDALL CO., Huntsville, Ala.

NEW FOLDER— **FREE** FOR YOUR GUIDANCE FILE

"VOCATIONAL OPPORTUNITIES IN THE HOTEL AND INSTITUTIONAL FIELD"
The hotel and institutional fields offers unusual opportunities today to men and women, both young and mature. The Lewis School—original and only school offering both resident and home study hotel training courses has prepared a FREE folder for Guidance Officers giving full details about this fascinating field. Write on your letterhead to:

LEWIS HOTEL TRAINING SCHOOL
Vocational Guidance Div., Room DA-4904, Wash. 7, D. C.

New Catalog of fresh ideas
for project activities in plastics, ceramics, leather, wood, metal.
Handsome desk and project accessories — desk fountain pens, desk balls pens and pencils, swivel-funnel-holders, plus many new items!

Gilbert & Miller INC. 404 FOURTH AVE. NEW YORK 16, N.Y.

COMMENT

The Journal's "Philadelphia Story" rings the bell—it really is a cross section of the whole membership. And the tribute to Senator George is most fitting.—THOS. H. QUIGLEY.

* * *

The Executive Committee of the Minnesota Vocational Association wishes to commend you on the excellent job you have done on the Minnesota salute issue. The 3,000 copies you sent are being distributed throughout our state.—ROBERT M. WORTHINGTON, 1957 President, MVA.

* * *

The October issue of the Journal was certainly a monumental piece of work. This issue gave an unusual and comprehensive picture of the manifold activities of AVA. So far as I could determine, no facet of our far-flung organization was omitted and no personages of importance went unrecognized.—CLYDE H. WILSON, Professor of Industrial Education, University of Tennessee.

* * *

We are still talking about your visit (referring to Dr. Mobley's recent trip). Your profound speech so full of gems of thoughts expressed in a characteristically easy-to-understand shirt sleeve American English has been the best we have heard for a long time. Your magnetic and winning personality was inspiring especially among the student farmers privileged to pose with you in pictures. Your charming, democratic ways bespeak of a great people that the Americans are.—ARCADIO G. MATELA, President, Central Luzon Agricultural College, Nueva Ecija, Philippines.

* * *

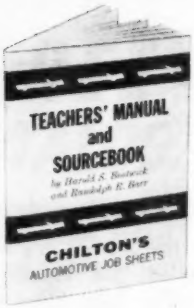
Ever since we retired from vocational work we have been receiving the JOURNAL and enjoying it. The October issue seemed to us to be the best issue of them all.—LAURENCE PARKER, Stockton, Calif.

* * *

I feel that the AMERICAN VOCATIONAL JOURNAL is the most valuable single service rendered by the Association to its many members. It gives them a feeling of belonging to the Association.—C. L. GREIBER, Wisconsin State Director, Vocational and Adult Education.

Complete Illustrated Step-by-Step procedure

CHILTON'S AUTOMOTIVE JOB SHEETS for Vocational, Technical, High Schools



"I never realized how much easier a teacher's job could be . . . I have so much more time for individual instruction now that I use Chilton's new, unique job sheets!" Teachers from all over the country are writing us that they are more than enthusiastic about these educationally sound flexible job sheets. Separating the "how to" from the "why", they can be used on live cars or instructional units and varied according to equipment used.

Write in for copies on 30-day approval

I. THE ENGINE WITH SUPPLEMENT: ON THE FUEL SYSTEM, $3.80. II. THE CHASSIS, $2.45. III. THE AUTOMOTIVE ELECTRICAL SYSTEM, $2.45. TEACHERS' MANUAL AND SOURCEBOOK, $1.35.

CHILTON COMPANY
Book Division 56th & Chestnut Streets, Philadelphia, Penna.

CARVING TOOLS
HOBBYCRAFT SETS
IMPORTED FROM GERMANY
Complete line of Chisels, Gouges & Parting Tools in Straight, Long Bend, Spoon, Back Bend & Fish Tail. Over 30,000 Tools in Stock. Many Special & "Hard to Get" Items. Low Prices. Liberal Discounts to Schools & Dealers.
BIG 8 PAGE FOLDER FREE. Write To-Day.
FRANK MITTERMEIER (Est. 1936)
3577 E. Tremont Ave., New York 65, N.Y.

OLIVER heavy type Jointers assure smooth, accurate jointing, fitting

Oliver 8-inch Jointer planes stock for perfect glue joints. Has 60-inch polished tables. Three-knife cutterhead runs in self-aligning ball bearings. Fence adjustable to 45° across table. Table lowers up to ½" for rabbeting. Write today for Bulletin No. 144.

Oliver Jointers made in 6" to 30" sizes

OLIVER MACHINERY COMPANY
Grand Rapids 2, Michigan

Latest Word

from WASHINGTON

► SATELLITES AND ACTION. On the same sad day that the people of the United States were shocked and stunned by the failure of the Vanguard to launch America's first earth satellite, The Joint Federal-State Action Committee made public its progress report No. 1, recommending, among other things, that federal funds for vocational education be eliminated.

Although this proposal did not receive the newspaper publicity accorded the failure of the Vanguard, it would—should the recommendation be implemented—be of far greater danger to the economy, security and well being of our nation than the failure of the Vanguard.

The proposed scheme is so impractical and unfair to small and poor states that its implementation is not likely. It proposes to eliminate federal aid for vocational education, sewage treatment construction and allotments to states for national disasters and, in lieu thereof, make available to the states 40 per cent of the 10 per cent federal tax on telephone service to those states "enacting a four per cent local telephone tax, not counting taxes already levied prior to the adoption of the credit device." This, of course, is one of the chief "jokers" in the diabolic plan.

According to a recent press release, the Board of Managers of the Council of State Governments, meeting in Hot Springs, Ark., December 6th, voted 35 against and seven for a motion to immediately adopt the plan proposed by The Joint Federal-State Action Committee. This, of course, was a resounding defeat for the loosely-planned recommendations that would have tremendously favored rich states and, at the same time, wielded a crippling blow to vocational education—the program that has played such a major role in making our nation the richest and strongest on earth.

Had this plan been approved by the Council of State Governments, there is much evidence that the Bureau of the Budget would have recommended no appropriation for vocational education for fiscal 1959. It is hoped that the strong opposition of the Board of Managers of the Council of State Governments to the adoption of the plan will result in the Bureau of the Budget recommending no cut in federal funds for vocational education for the coming fiscal year. The Budget Bureau may recommend the same plan that was proposed a few years ago, that federal funds for vocational education be gradually reduced over a period of years, until finally eliminated. We will know for sure on or about January 20 when the budget will be submitted to Congress.

The proposal of The Joint Federal-State Action Committee will doubtless be given further consideration at the next National Governors' Conference to be held in Miami, Florida, in May 1958. We have not heard the last of the proposal yet. Upon request we will be glad to furnish free to any AVA member copy of a Comparison Table that shows the present federal allotments to states for vocational education, sewage treatment construction and allotments to states for national disasters as compared to amounts that would become available to each state from 40 per cent of the 10 per cent federal tax on telephone services.

It is reassuring to know that at this, the close of the 40th anniversary year of the passage of the Smith-Hughes Act, the law still stands—as it was originally written by the brilliant legislators and vocational leaders who foresaw America's crucial need for a sound, far-reaching vocational program. The Board of Managers of the Council of State Governments' overwhelming vote in favor of continuing federal funds for the program is, in fact, an important recognition of what vocational education is doing and can further accomplish for our nation.

► LEGISLATION. When the 85th Congress reconvenes on January 3rd it will be confronted with an unprecedented flock and variety of legislative proposals intended to encourage the teaching of science and mathematics in secondary schools and colleges.

Leaders in educational organizations and groups are busy developing proposals for presentation to Congress. Some may make sense; some will not.

Educators throughout the nation—particularly school administrators—are being bludgeoned daily to inaugurate programs that would attempt to make scientists and mathematicians out of all secondary school students.

Fortunately, most educators will have the wisdom and courage to stand pat on a sound educational program that takes into consideration the talents, interests and abilities of all students. This nation has no need for millions of people with a "smattering" of science and math such as they would have if every secondary school in the nation should suddenly make courses in these fields compulsory for all.

True, we do need a few hundred thousand able, talented, outstanding scientists and mathematicians. Guidance counsellors have an important role to play in finding the students best fitted for these fields.

Many people are pointing to Russian schools, especially their academic schools, in which the curriculum is weighted heavily with languages, science and mathematics. But they fail to report that in addition to building science and math training programs, the Soviets in recent years have greatly expanded programs of vocational and technical training of less than college grade. According to reliable reports, Russia has to date some 3,800 "technicums" that are graduating more than 70,000 technicians annually. Russian engineers and scientists would be helpless without this vast force of technicians. Further, "technicum" students are carefully selected and are granted annual stipends to meet their expenses.

Russia has also accelerated significantly programs for training skilled workers of every type. Some people don't seem to realize that for every engineer there is need for some five to ten technicians and scores of skilled workers. Technicians and skilled workers are the product of vocational education.

Those who propose replacing vocational programs with courses in science and math are not thinking straight. They are not aware of all the facts—especially known facts about Russian schools and American needs.

There is no question but that scientists and engineers are more important to our nation's security and well-being today than ever before in the history of the world. But we do not need millions of half-baked scientists and engineers. We do need a few hundred thousand able people in these fields who are well trained and well suited to their work.

Congress will most likely give careful consideration to the establishment of an Academy of Science and Engineering at the graduate level that would enroll students with outstanding talent in science and engineering who would be selected through competitive examinations. Financial aid similar to that provided cadets at West Point, Annapolis and the Air Academy will likely be a part of the proposal.

► HAPPY NEW YEAR. Each year as we have moved forward in vocational education we have faced and solved problems that could have meant defeat had it not been for our unity of purpose and dedication to the precept of "training for useful employment all those who can profit from it."

The year ahead will not be without its challenges and demands for wisdom and true leadership.

Let us join in hoping that integrity, good judgment and devoted service will again identify our program of work in behalf of the millions of Americans who will find useful, vital roles in society through sound vocational programs.

W. D. Mobley

EXECUTIVE SECRETARY AND EDITOR-IN-CHIEF

Applause

—to Fortune magazine's December 1957 issue for featuring *The Turn in the Engineer Market. Recommended* reading for vocational and practical arts educators, this article points out that the post-war shortage of engineers has suddenly disappeared and raises the question as to whether or not it is gone for good.

* * *

—and to James Basselman, Editor, Agricultural Engineering for his editorial *Engineering Shortage . . .*, November 1957. Mr. Basselman quotes a statement recently released by the National Society of Professional Engineers Board of Directors, which includes the following:

"Special action to increase today's supply of engineers is not considered necessary or as desirable since engineering enrollments are at an all-time high and are continuing to increase."

* * *

—and to Scientific and Technological Manpower's News Round-up, December 15 issue, for the following item:

"A 'very considerable' speedup could be achieved by the same number of engineers currently directing the vast federal highway program if they were supported by an adequate number of technicians, declares Robley Winfrey, Chief of Personnel & Training, Bureau of Public Roads. He told the President's Committee staff the average state-employed engineer in the highway program is supported by 1.26 technicians—whereas he needs three and, ideally, four. Mr. Winfrey says the use of time-saving devices has had limited effect in relieving the shortage of technicians, for, although such techniques as photogrammetry and electronic computing aid engineers they also increase needs for technicians."

* * *

—to the 1957 senior class, Thomas A. Edison Vocational and Technical High School, Elizabeth, N. J., for their honor-winning issue of *Edisonian,* the school's annual yearbook. The June, 1957 edition won a "medalist" from Columbia Scholastic Press Association—meaning it rated in the first place group in the national school journalism competition. Congratulations!

* * *

—to AVA's newest affiliate, the Canadian Vocational Education Association, for going all-out on a sweeping membership drive, with ambitious goals! By the way, the name was changed officially from the Vocational Association of the Dominion of Canada to CVEA at an Executive Committee meeting last fall.

* * *

—to the Department of Industrial Education, College of Education, Wayne State University, Detroit 2, for producing *Free or Inexpensive Teaching Devices in the Field of Metalworking*—13 pages of up-to-date listings, available at no charge.

* * *

PHILCO INAUGURATES A NEW SERVICE
TO HELP MEET THE MANPOWER SHORTAGE IN TECHNOLOGY

PHILCO TECHNOLOGICAL CENTER

For the first time, the vast technical training facilities and services of the Philco Technological Center are being made available to qualified individuals and organizations outside the Philco Organization.

Prepare for a career in the dynamic, new transistor field with:

CORRESPONDENCE COURSE ON
TRANSISTORS

Here's the most complete and authoritative correspondence course ever offered in this dynamic new field. It covers transistors from their basic nature through all important applications.

Increase your knowledge and value in the important radar field with:

CORRESPONDENCE COURSE ON
RADAR

This authoritative correspondence course on Radar can help you gain valuable technical knowledge in this dynamic growth industry. Provides wide coverage of Radar from theory through applications.

PHILCO
TECHNOLOGICAL
CENTER

For additional information, write to:
PHILCO TECHNOLOGICAL CENTER
TECHREP DIVISION
22ND AND LEHIGH AVENUE, PHILADELPHIA 32, PA.

Guest Editors

Velma Linford
Supt., Public Instruction

WHILE scientists argue, educators implore, statesmen flounder, and special interests harangue over the implications for education of current happenings, vocational education moves quietly, steadfastly and decisively in Wyoming. The role is clear, and the charge strategic. It will assist youth and adults to do better the things each must do to earn a living. Extending education beyond academic subjects, vocational education gives direction, competency and dignity to work.

Beginning in the high school, vocational instruction lays the foundation for better working practices. The Future Farmer today will influence the economy of agriculture tomorrow, either as a farmer, teacher, economist or farm technician. The homes will be happier and children healthier because of Future Homemaking classes. Schools used are increasing both business and distributive knowledge to meet the shifting economy from production to distribution as pupils earn as they learn.

Vocational education goes beyond the classroom to reach the "drop-out" and graduate. Thousands who work on technical pursuits are learning in evening classes, or on-the-job training, new skills and improved techniques in electricity, welding, shop, mechanics, and dozens of other occupations. Culinary and custodian staffs are using the opportunities to enhance their knowledge. Women and men are achieving competency in practical nursing. Vocational education in Wyoming has dramatized the concept that learning is every one's opportunity. Homes and communities show that influence today. Thousands of adults will have their demands for vocational classes answered tomorrow as we realize the need for diversity in content and levels.

Personally, I can say to you leaders in the field, you have done much; tomorrow demands more in the important area of adapting education to individual needs. I know you are ready to initiate a state-wide program to bring to all the privileges many have experienced in vocational education. *You are equal to the task.*

Milward L. Simpson, Governor

ON BEHALF OF THE citizens of wonderful Wyoming, I am proud to pay tribute to those who participate in and direct the vocational education program in our state. This program has proved its worth in Wyoming over the years. It involves training in vocational fields for useful employment. In such programs as the Future Farmers of America and the Future Homemakers, our young people learn valuable lessons in parliamentary procedures, self-government and cooperative accomplishment. Through active participation, they learn leadership and responsibility. The entire vocational program should inspire individual initiative.

At the last session of the Wyoming State Legislature, nearly $86,000 was appropriated for the vocational education program. It may be well to note that the Joint Federal-State Action Committee is giving consideration to continuation of this program on a federal basis.

Wyoming's economic future holds a bright promise for its citizens. We have a vast storehouse of natural resources, and we have independent and ambitious citizenry. We need nothing more than opportunity to grow and develop and progress. The character of Wyoming, its citizens and its industries, fittingly lends itself to an enthusiastic and far-sighted vocational education program. Our people are still infused with those admirable traits of independence and adventure which characterized the early pioneers. I hope that same spirit will continue to prevail and our entire educational program, including the vocational, can and will maintain its distinction by retaining vigorous, healthy, local responsibility and control.

Sam Hitchcock
State Director, Voc'l. Educ.

THE WYOMING STATE Legislature passed the State Acceptance Act for Vocational Education in 1917. Since that time there has been a steady growth in all of the services embraced by the Act.

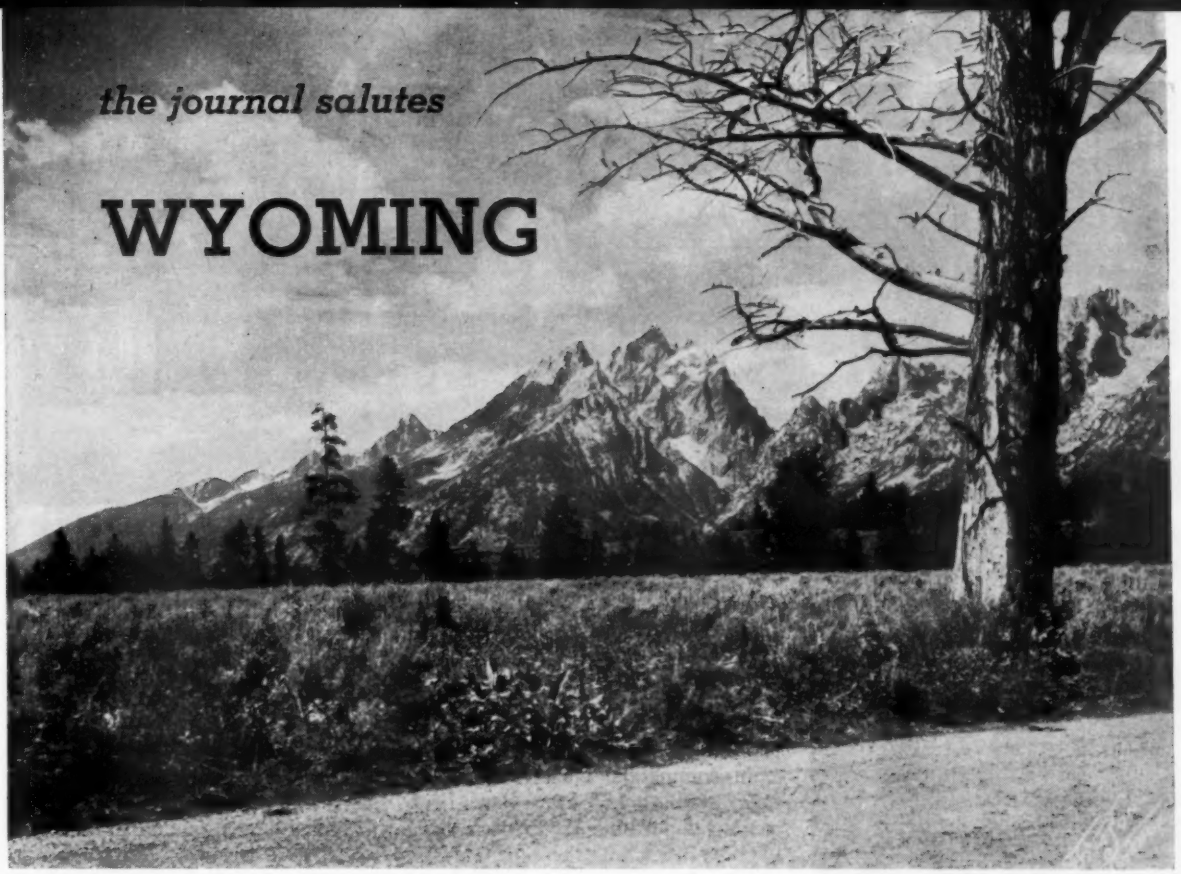
In the past this state has been primarily agricultural in nature. However, an industrial growth has started and prospects point to a large development of its natural resources. These include iron ore, uranium, and titanium. An enlarged program in the trade and industrial field will be necessary to meet workers' needs.

The State Board of Education, local boards of education, superintendents and principals of high schools have all shown an interest in the vocational program and have assisted in its development. The instructors of the various services should also be given credit for their fine work.

Wyoming considers it an honor to have this salute given to vocational education in the AMERICAN VOCATIONAL JOURNAL.

the journal salutes

WYOMING



A view of the Grand Teton mountain—part of the 40-mile Alp-like Teton range—from Grand Teton National Park.

—where vocational education moves steadfastly forward—

THE NAME WYOMING came from the Delaware Indians, and it means "The End of the Plains." Early Americans found immense herds of buffalo, antelope, deer and elk feeding off Wyoming's lush grass.

Probably the first white men to see what is now Wyoming were the Verendrye brothers, who were French Canadian explorers. Various historians claim the Verendryes saw the Big Horn mountain range in north-central Wyoming in January, 1743. However, better than 50 years passed before fur trappers, or mountain men began to penetrate Wyoming.

John Colter, a former member of the famed Lewis and Clark Expedition, explored what was ultimately to be known as Yellowstone National Park and the northern portion of Wyoming in 1807. Generally speaking, the Rocky Mountain fur trading era reigned from about 1807 until 1840.

The Wyoming Organic Act was signed in 1868 creating Wyoming a territory. In October of 1869, Governor John A. Campbell convened the first territorial legislature in Cheyenne. Probably the most important legislation completed during its several years of operation was an act signed by Governor Campbell on December 10, 1869, granting equal rights to women for the first time in the history of the nation. In addition to rights of voting and holding public office, women of Wyoming Territory were also granted the right to serve on juries.

After 21 years, the territory of Wyoming in 1890 became the 44th state; it is the 8th largest.

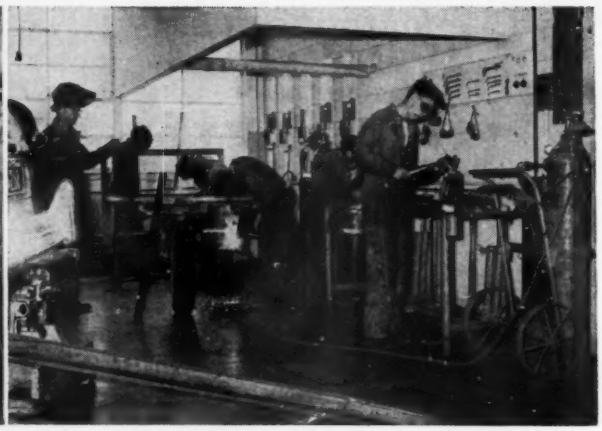
If a straight line were drawn east to west across Wyoming, the distance would be 375 miles, and from north to south, a distance of 276 miles.

In the past few years reclamation of marginal lands has been stepped up with huge water storage projects. Many similar projects are under consideration at the present time. So, all phases of agriculture-livestock raising, dry farming, and irrigated farming—have grown and will continue to.

COMMERCIAL OPERATIONS in the petroleum industry and oil well drilling in Wyoming had been carried on for a number of years when in 1912 the first full scale oil boom took place at Salt Creek. In 1955 some 90,000,000 barrels of oil were produced.

High beds of commercial coal were discovered in the southern part of Wyoming at an early date. Coal has been mined in almost every part of Wyoming, and it has been reckoned that the state has the largest bituminous and sub-bituminous coal reserves of any state in the Union.

In addition to coal and oil, the state is rich in other mineral resources. Natural gas, bentonite, trona and sulphur figure prominently in Wyoming's multi-million dollar mineral resources industry. In the past few years, extensive prospecting has led to the discovery of uranium. The Atomic Energy Commission has erected a buying station at Riverton, and processing mills are being constructed at present.



Trade and industrial education in Wyoming serves all groups that have asked for training programs.

Trade and Industrial Education

AN ATTEMPT has been made in Wyoming to have a well-balanced program in trade and industrial education. We have endeavored to serve all groups which have requested training.

Since the oil industry is one of the main commercial enterprises in the state, training programs have been conducted for this group each year. In cooperation with the American Petroleum Institute, experts in this field have been brought in as instructors. Courses have included petroleum drafting, treating oil emulsions, electrified lease operation, water flooding, sucker rod and pumps, vapor and gravity control, and drilling mud control. Three hundred and fifty-six men were given training last year.

The electrical linemen training program has been in operation for a number of years. This is a job safety program and is carried on by an itinerant instructor, who makes monthly visits over the state. This training includes men employed by the REA and workers for other utilities. Part of the instruction is given in the classroom and the balance is taught on-the-job. Last year's enrollment was 108.

AN ITINERANT instructor is employed to conduct training for fire departments in Wyoming. This program is set up on a district basis. Centers are selected for the course and departments in near-by cities are invited to send their men to the school. The material covered is determined by the needs of the group. Classroom instruction and demonstrations are used by the instructor. Firemen trained last year totaled 140.

Each year custodian courses are organized at different centers. As in the case of firemen training, centers are selected for the training, and near-by cities are invited to send their custodians for training. An out-of-state instructor is used for this program.

During the past fiscal year practical nurse training classes were organized in several centers. It is planned to employ a state nurse consultant to assist in organizing and supervising courses. A bulletin has been prepared to assist local schools in planning nurse training programs. Ninety-seven persons were given training last year.

RELATED TRAINING classes for apprentices have been offered in several centers. These include instruction in electronics, blueprint reading, carpentry, plumbing, electricity, sheet metal, welding, machinist, and boilermaker and blacksmith. To take care of the isolated apprentice a plan has been developed with the University of Wyoming whereby they can secure related training courses. The University has set up a library of materials for these courses and the apprentice may secure the course needed for his craft. This is a work-book type of training, and when completed they are returned to the University for correction. The teacher training department operates the program.

The status of the trade and industrial teacher trainer at the University has been changed from resident to itinerant. Under agreement with the University, the teacher trainer will devote 50 per cent of his time in the field. He will conduct teacher training workshops for instructors and assist in supervision of trade and industrial departments.

Business Education

IN WYOMING business education provides the student with business knowledge, trains him in specific skills for employment in business and for further study in the business field, and develops desirable business-like habits and character traits. Vocational preparation is the primary objective of business education. The socio-economic objective should not be understated, however, as it also has a definite part in the curriculum of business education in our secondary schools.

EVERY HIGH SCHOOL in the state includes some business education in its curriculum. Enrollment in business education classes during the school year 1956-57 reached 9,146 students.

A great deal of work is being done to expand the cooperative office training program. The student is being trained on the job where he can become fully prepared for a position in the business world. Nine programs were operating during the 1956-1957 school year.

Our schools are recognizing the advancement and expansions that are taking place in business today, and they are providing their students with the opportunity to gain a knowledge of the business world and giving them the necessary skills to secure business employment.

Wyoming offers two types of distributive education: secondary school training and programs for adults.

Every high school in the state offers some type of business education.

Distributive Education

DISTRIBUTIVE EDUCATION is vocational education designed for people who are engaged in or preparing to enter the distributive occupations. Distributive occupations are defined as those followed by workers directly engaged in merchandising activities or in contact with buyers and sellers.

In Wyoming, two types of training are offered—secondary school training and adult training. The secondary school training is offered in the eleventh and/or twelfth years of high school under a cooperative plan whereby the students average a minimum of 15 hours per week in distributive occupational employment throughout the school year. Adult training is offered in morning, afternoon or evening classes for those already engaged in distributive occupations. There is a level of training available for all who engage in selling goods or services.

THE NUMBER OF PEOPLE employed in distributive occupations varies from a low of approximately five per cent in some counties to a high of 32 per cent in others. The program is designed to meet the training needs of counties that have either small percentage or a large percentage of the total employed in distributive occupations.

The short business clinic or sales institute is used a great deal in the less populated areas. This type of training makes it possible to obtain well-qualified instructors that would not be available for longer periods of time.

In communities that have a high school distributive education program, the coordinator handles the adult program. Regular evening classes are offered in various areas of distribution.

Distributive education has been offered since the passage of the George-Deen Act in 1936. The growth of the program has been slow, but both employers and employees are now recognizing the need for training in the field of distribution and, as a result, the future of distributive education in Wyoming is bright.

DE's future in Wyoming is bright. Although the program has had relatively slow growth, employers and employees now recognize its worth.

Homemaking Education

VISUALIZE, IF YOU CAN, a state of 97,914 square miles, a total population of 290,500 people, and only 86 senior high schools with 8000 girls and one higher institution of learning. That is Wyoming.

Though distances are great with neighboring schools often 50 or 100 miles apart and rarely nearer than 25 miles, homemaking teachers, and state and University staffs plan and work cooperatively toward yearly and long-time goals. The following eight large goals were agreed upon for 1957-58 with each staff setting up its own program for working toward these goals:

Improve instruction through a continuous curriculum revision program.

Strengthen pre-service and in-service teacher education helps for the improvement of local programs.

Work cooperatively for the improvement of homemaking education in Wyoming.

Encourage promising students to prepare for careers in home economics, including teaching.

Continue personal and professional growth through graduate study participation in conferences, use of research findings, reading, and membership in professional organizations.

Plan and carry out effective interpretation of the total home economics program.

Work with other school and community groups whose programs relate to home and family life.

Extend the program to more people on all levels.

The long-time curriculum revision program on both the University and the 7th through the 12th grade levels, summer school offerings, in-service teacher education helps—including the annual state homemaking teacher's workshop conference—are cooperatively planned by all concerned. Future Homemakers of America plans for the year are developed by the State Executive Council and State Advisers and policies are set by a State Advisory Board that meets yearly.

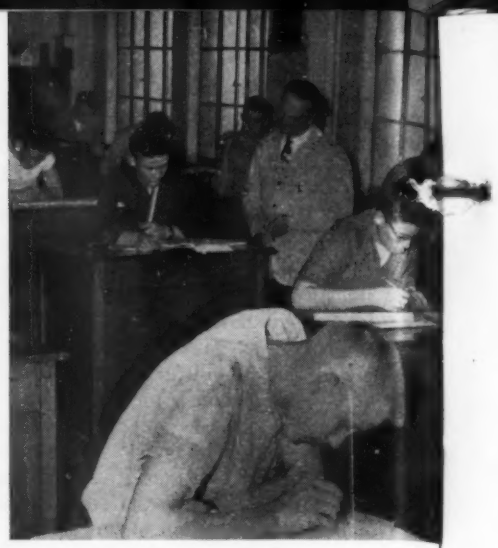
The basic purpose of the homemaking education program is to improve home and family life in Wyoming.

As evidence that the homemaking program is considered an integral part of the total school program, 71 of the 86 senior high schools offered homemaking instruction last year. The programs in 41 of these schools were reimbursed from federal vocational education funds. Approximately one-third of the 8,000 senior high school girls were enrolled in reimbursed classes. Another 1,220 senior high school and 2,251 seventh and eighth grade girls were enrolled in non-federally reimbursed classes. State consultants give the same assistance to all programs.

The adoption of a State Foundation Program for the allocation of state funds for education in Wyoming by the 1955 State Legislature has made it possible for more schools to develop homemaking programs and to improve department facilities and programs. It is anticipated that all senior high school programs may soon meet the state's standards for federal reimbursement.

TWO THOUSAND Future Homemakers of America members in 63 chapters carry on activities related to the goals of the organization and contribute to the national and state projects.

Two hundred and four adults were enrolled in furniture repair and upholstering and clothing classes; and 87 boys were enrolled in homemaking or family living classes the past year.



Industrial Arts

SINCE THE WYOMING Foundation Bill included industrial arts as a vocational subject, it is necessary to give supervision to this program. A course of study was developed for schools to use in order to qualify for reimbursement. Standards were also set up for qualifications of the instructors.

The industrial arts group in Wyoming, well-organized, attends our annual vocational education conference. As with other vocational services, the president of their group is one of the vice presidents of the Wyoming Vocational Education Association and a member of the executive committee. Next year a member of the group will be WVA president.

Industrial arts is offered in most of the elementary, and junior and senior high schools in Wyoming. In many schools the general shop plan is followed and in others unit courses are given. Instruction offered includes mechanical drawing, woodworking, electricity, sheet metal, art, auto mechanics, leathercraft, welding, plastics, and machine shop.

A REGIONAL Industrial Arts Fair was conducted last year at Green River. Schools in the region were invited to send exhibits. Cups and awards were given to the winners. This proved to be a successful activity. Plans are under way to conduct a similar one this current year.

Instruction methods improve a student's knowledge in safety and healthful practices, his ability to design and draw the expression of his ideas as well as develop a measure of skill in use of common tools and machines.

Industrial arts classes last year enrolled a total of 3,711 students.

Vocational Agriculture

FORTY YEARS of vocational education in agriculture have passed since the enactment of the Smith-Hughes law on February 13, 1917. This fine program has served Wyoming since its inception. Vocational agriculture in our great state is an organized systematic educational program, designed for persons who are already farming or who are preparing to farm. The purposes of this program are to increase farming proficiency and income and to improve living conditions and rural opportunities.

Wyoming's rural population is small; thus a small number of vocational agriculture departments are found. At present there are 55 departments employing 59 instructors. In most cases local taxpayers have seen the value of the program to their people and community and have furnished adequate facilities to carry out the local program of work as designed by the instructor in cooperation with the administrator and, in many cases, an advisory committee. New facilities are being built each year.

FUTURE FARMERS obtain their training in some of the most modern and up-to-date vocational agriculture departments found anywhere in the country and through competent instruction find themselves back on the farm. Intensified farming is practiced in the Big Horn Basin where sugar beets, potatoes, small cereal grains, alfalfa, corn, and other miscellaneous crops work into a balanced agriculture program. Boys are encouraged to establish a sound livestock program and then provide the necessary food stuffs raised on the farm, thus incorporating a sound program.

The program of vocational agriculture in Wyoming also recognizes the responsibility to out-of-school people. Young farmers getting started in their life's occupation need and want the services of our people to call them together in regular organized classes for the purpose of identifying and studying the problems. These young farmers buy farms and ranches. They need to exchange ideas.

Then also there is the adult farmer group who are already established in farming but who want an opportunity to meet to discuss new ways and means to cope with the most up-to-date areas in connection with farming and ranching. These young farmer and adult farmer groups are staunch supporters of vo-ag and the FFA.

The supervised farming program carried by all boys enrolled in the course in Wyoming is considered the core of the entire program. Schools located in communities in which the agriculture is mostly livestock spend very little time in the classroom studying other enterprises except livestock and those closely related to stock raising. The Wyoming Association FFA boasts that 100 per cent of the boys studying vocational agriculture belong. In 1937 the National President came from Wyoming.

WYOMING IS PROUD to recognize Sears-Roebuck Foundation assistance not only in our FFA membership but in the entire Wyoming citizenry. A registered sheep program has been in operation for 15 years, giving many young men a start in the purebred sheep business. Eight years ago a soil and water conservation program was started, giving awards to FFA members who did outstanding work on their home farms and ranches in conserving soil and water. Local soil conservation districts have assisted through their technicians.

The following areas need some further development to improve the overall vocational agriculture program in Wyoming. These are young farmer and adult farmer education, a program to reach a few rural areas that are without vocational agriculture, and some additional work on guidance for the boy who does not have a farm or ranch for post-school establishment.

Veteran Programs

THE DIRECTOR of Vocational Education is the secretary of the Wyoming State Approval Agency to approve schools and courses of study for on-the-farm training of veterans. A state inspector is employed to assist in organizing classes, inspect farms and check on compliance regulations. He also checks proprietary schools for approval such as flight, beauty, etc. The classes now in operation are composed entirely of Public Law 550 veterans.

AN ATTEMPT has been made in the institutional on-the-farm classes to teach business principles as applied to agriculture. This has resulted in new improved practices and adjustments of types of farming. Particular attention has been given to working out a course of study for each veteran which will be of the greatest benefit to him. The teachers in this program have been well trained and the instruction has assisted in developing a well-organized farming program.

Current enrollment in veterans programs is 184.

The Multiple Values of Homemaking Education—

HOW THE PROGRAM OF WORK ACCELERATES PROGRESS

By Mrs. Marie C. Moffitt

Mrs. Moffitt is State Itinerant Teacher Trainer, Home Economics Education, North Carolina College at Durham.

WHILE *home economics* is a term used to designate a field of education, *Homemaking Education* is a program of organized experiences designed to help in-school (secondary) and out-of-school groups in the solution of their family living problems in the home, school and the community, and to assist them in assuming responsibilities of homemaking. Thus a good homemaking program in a school is one that is planned to meet the needs, interests and abilities of pupils of various social, economic and educational levels.

Hartman substantiates this point when he says, "Any curriculum that pupils and teachers plan together is far more likely to meet the personality requirements of all concerned in the educative process than one that is unilaterally determined." [1]

Everyone, teachers of vocational homemaking (federally aided) and teachers of non-vocational (general) homemaking, should consider suggested plans for the entire year. It is important for the homemaking teacher to recognize her position as leader or guide in the learning-teaching situation. Cooperative planning with pupils, parents and other administrators has long been recognized as an essential in building a good program in any field of education.

How does the teacher achieve this functioning philosophy? She enlightens herself about the home and community needs and resources before planning her annual program of work. Her findings will influence her philosophy of homemaking education for that particular community.

The vocational homemaking teacher, hired for a longer term than the non-vocational or general teacher of homemaking, usually arrives in the community before the opening of school. This provides an excellent opportunity to visit with pupils and their families. The non-vocational teacher might also consider visiting the community before school opens.

The next step is to evaluate and use findings in the overall planning of the program of work. The plan includes goals and experiences of all parts of the program—principally in the all-day school, adult, and the New Homemakers of America.

The program outline featured here and developed by homemaking teachers of western North Carolina has served as a good guide for new and experienced teachers when planning their annual program of work.

Program Outline

- Officials and School Personnel
- Brief History of School
- Philosophy
  - a. *This I Believe*
  - b. *Philosophy of School*
- General Survey of Community
  - a. *Type of Community*
  - b. *Nationality*
  - c. *Population and Industry*
  - d. *Income and Commercial Facilities*
  - e. *Recreational Facilities*
  - f. *Transportation*
  - g. *Religion*
  - h. *Health*
- Home and Community Needs
- Schedule for Home Economics Teacher
- The School Set-up
  - a. *Space and Equipment*
  - b. *Funds*
  - c. *Duration of Program*
- Objectives of Home Economics Program
- Classroom Program
- NHA Program
- Adult Program
- Home Projects and Practices
- Publicity
- Professional Growth and Improvement
- Future Plans for Department
- Budget
- Joint work with other agencies
  - *Example: The Challenge Program*
  - *Agricultural Worker's Council*

One of the best ways to publicize the homemaking program or any field of education is to send out well-trained pupils. To this end it is necessary that careful planning and an enriched curriculum be offered. The *all-day* classroom instructional program consumes the major part of the teacher's day. Each day's work should make a contribution to the total yearly program in which small goals will lead to a longer, more comprehensive whole as well as to the overall objective of homemaking—to prepare individuals for effective home living.

AREAS OF instruction included in the high school curriculum are foods and nutrition, clothing, family economics, housing, health, family relations and child development. Meaningful objectives should be set up cooperatively for each of these areas of homemaking instruction.

Changed behavior is the ultimate goal of education. Activities, selected with definite learnings in mind, may be carried out in the classroom FHA or NHA chapter or as home projects and/or home practices. These experiences may grow out of the unit of instruction or the prevailing home situation—selected on the basis of interests, needs and abilities. Home projects and home practices are essential parts of the homemaking program.

A conference period in the all-day school program allows teachers to counsel with pupils in selecting, planning and evaluating home experiences. And the teacher gains a better understanding of her pupils and their situations. Counseling helps an individual or group to think through problems. Home visits provide an understanding of the family situation.

Integrated with the all-day program are the programs of the Future and New Homemakers of America. As a preliminary approach to the organization of a chapter, the progressive teacher learns purposes and plans of the organization from the chapter Official Guide. She will contact the State Adviser for further information and suggestions. In planning the year's work, she will include goals and chapter activities. Developing each pupil's potentialities for leadership has been an organization-wide emphasis in the two youth organizations.

Homemaking education programs for adults serve young women and

[1] George W. Hartman, *Educational Psychology*, New York: American Book Company, pp. 476-477.

men who are preparing to establish homes as well as experienced homemakers who are in need of further education to meet new problems.

THE METHOD of instruction used in teaching adults may need to vary somewhat from that used for adolescents. Every lesson must count since adult desire for learning centers around immediate interests.

"The success of an adult program may be measured in many ways. Simple criteria which might be used in determining the effectiveness of the adult homemaking program might include: the number of persons who attend classes regularly, remarks made by members, the extent to which individuals use their learning in their living and are sharing this learning with others and requests for additional and different help on homemaking problems. Evaluation should also be made in terms of what it was hoped might be accomplished." [2]

The annual program of work should also include objectives for other phases of the program and possible means of accomplishment. Among these may be: present and future plans for the department, department budget, publicity, and joint work with other agencies.

The efficient teacher will attempt to integrate all phases of the homemaking program with the total school program. The example below shows how the agriculture and homemaking teachers in Catawba Rosenwald School of Catawba, North Carolina, told of their integrated vocational programs:

"North Carolina has accepted the challenge through a united agricultural program—where are we in Catawba County? To discover the answer to this question, the agriculture and homemaking teachers made a cooperative review and study of information which had been printed concerning Catawba County as well as that which had been accumulated by the agriculture teacher over a period of more than 17 years experience doing vocational work in the county. Coupled with this, much traveling was done for the benefit of direct contact with the farms, the farmers, their families and their homes.

"Following this survey of the county's history and its natural and human resources, the second preliminary step was to set up some goals and objectives in the light of the findings mentioned above as well as other data too numerous to list.

"In the school an initial step was to interpret our challenge as well as our program and to establish support with the principal, who was also new in his role, and whose interest and support was needed because of the constant interaction among principal-teacher-pupil in carrying out anticipated projects through the years. This was done through frequent conferences, sharing of ideas, information, references, and experiences.

"When school opened in the fall, the next step was to consciously promote a similar campaign of interpretation to faculty co-workers and to pupils in the classroom, as well as through NFA and NHA meetings. In the wake of this campaign to interpret the challenge, cooperative teacher-pupil-parent planning was done in an effort to develop the program around expressed needs and interests of pupils as well as around the existing conditions.

"In the community adults were organized and functioning in an adult program under the name of *The Home and Garden Club*. Each club meeting is actually an adult class which is conducted in a variety of ways. Furthermore, adults in the community were already accustomed to using their own community project, the cannery, which is operated under the school.

"In addition to the joint planning of common goals and objectives by the homemaking and agriculture teachers through the principal, teachers, pupils, and community patrons, there was agreement on certain phases of the rural progress program to be emphasized in the light of the present community conditions. The felt needs to be stressed in planning the long-term program for rural progress were set up cooperatively. Some of the areas requiring immediate and long-term attention in this school community are: nutrition, home, school and community beautification, better gardening and management of money and resources.

"Next, to carry out goals, it was necessary for the homemaking and agriculture teachers to work as a team with farm and home, and whenever more expedient, with the men and women or boys and girls separately. To do this they utilized at least four resources.

"Finally as a means of evaluating the results of the efforts to promote better farming and better family living in our school community, we seek evidences of improvements found on the farm and in the homes of patrons who have faithfully followed through with ideas which have been advanced for community welfare with tangible results.

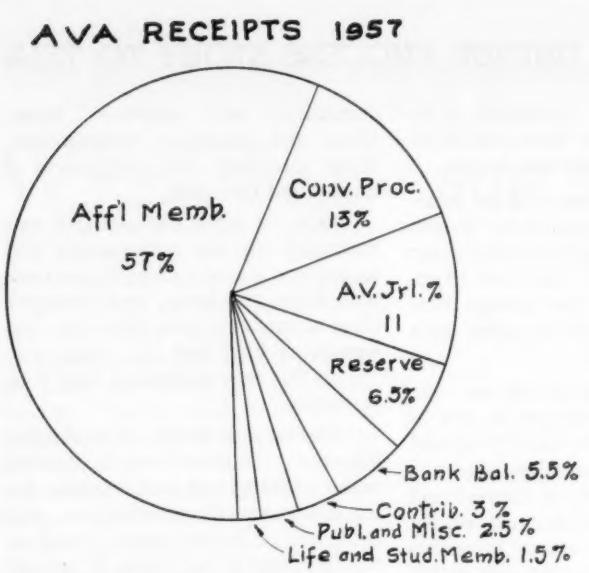
"In the area of nutrition there is increasing addition and use of home freezer lockers and frozen farm produce. Wiser use of pressure cookers is in evidence. Food conservation through canning both at the community cannery and in glass jars is widespread. There is a continual increase of electric or gas refrigerators in the county. Greater interest is being placed on balancing diets according to the Basic 7.

"Over the years the farmers are becoming more conscious of having soil tested, fertilizing to meet crop needs and rotating for better crops.

"As the result of the interest in management of money and resources, the farmers and community citizens have organized a credit union among themselves. These are a few of the tangible evidences by which we evaluate our program. Those intangibles, like values, appreciations, and attitudes are present, but, like all intangibles, hard to measure or explain."

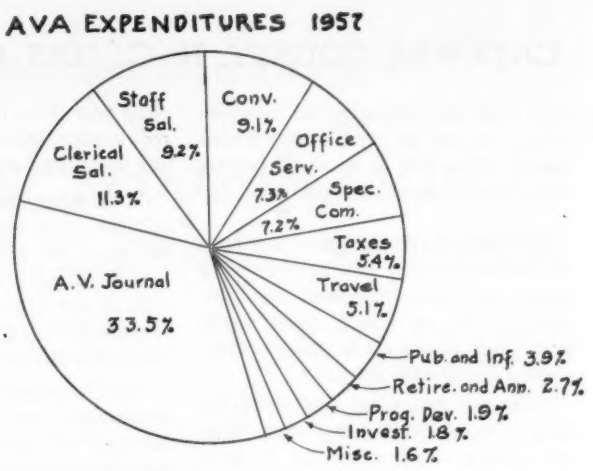
What makes a program "good" then is the way it meets the needs of the girls and boys and men and women of the community. Every teacher of homemaking faces a tremendous challenge as she works with her pupils, parents and administrators in making home life better for family members. Teaching of homemaking is one of the most rewarding vocations because it enables one to help family members with their real and basic problems.

[2] *A Guide to the Teaching of Homemaking in North Carolina Schools.* Issued by the State Superintendent of Public Instruction, Raleigh, North Carolina.



AVA Receipts

This graph represents the sources of receipts by percentages of the total. They indicate 57 per cent from affiliated memberships to 1.5 per cent from life and student memberships.



AVA Expenditures

The expenditures on a percentage basis show a wide distribution of coverage of AVA activities. About one-third of the receipts are used for the JOURNAL, while only 1.8 per cent went into investments.

by Dr. Charles W. Sylvester

Treasurer's Report, 1957

Dec. 1 1956 to Nov. 30, 1957, Inclusive

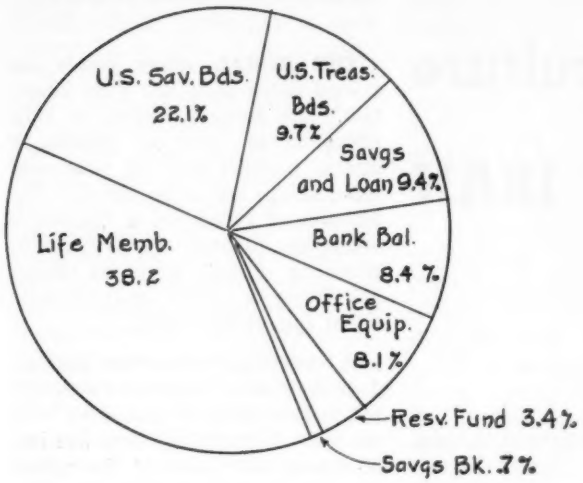
Balance in Bank, November 30, 1956 ..... $ 14,328.33

RECEIPTS

Association			
Membership Dues			
Affiliated and Direct	$141,318.50		
Life	3,445.00		
Contributing and Sustaining	290.00		
Student	713.07	$145,766.57	
Publication Sales		4,409.88	
Interest on Investments		1,546.50	
Contributions			
Travel of Officers	583.43	583.43	152,306.38
Annual Convention			
Rental of Exhibit Space—			
St. Louis	3,410.00		
Philadelphia	27,560.00	30,970.00	
Registration Fees		1,918.00	
Miscellaneous		152.99	33,040.99
The American Vocational Journal			
Advertising		22,059.25	
Subscriptions and sale of Journals		4,444.73	26,503.98
Miscellaneous			
Civil Defense Fund for Printing		7,467.42	
Transfer from Savings Account		9,000.00	
From Vermont Fed. Savings & Loan		7,000.00	
General, including Refunds		433.74	
Reconciled Accounts (Collections)		1,341.97	25,243.13
GRAND TOTAL			$251,422.81

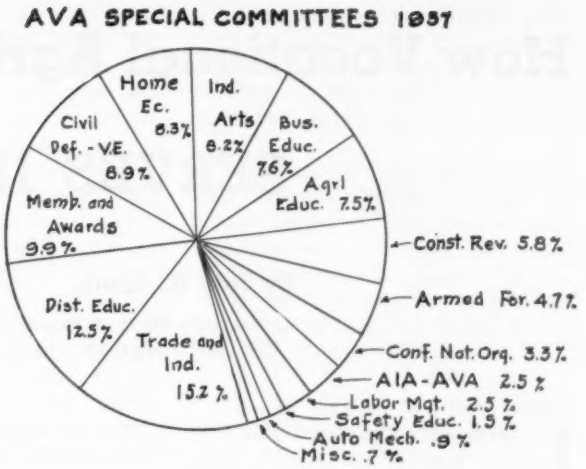
EXPENDITURES

Association			
Personnel Services			
Salaries:			
Executive Staff and Treasurer	$22,181.90		
Stenographic & Clerical Service	26,684.76		
With. & Soc. Security Taxes	12,944.62		
Annuity for Executive Staff	3,530.81		
Retirement Contrib.— Clerical Staff	2,063.57		
Hospitalization Service	729.12	68,134.78	
Annual C.P.A. Audit		150.00	
Legal Consultant		900.00	69,184.78
Travel			
Executive Secretary and Staff	4,536.12		
Executive Committee	7,784.10	12,320.22	
Office Services			
Printing, Postage & Stationery	3,152.13		
Books and Pins	370.95		
Publications and Dues	354.80		
Telephone and Telegraph	1,196.25		
Equipment and Supplies	6,967.60		
Office Rent	4,860.00		
D. C. Taxes	604.22	17,505.95	
Miscellaneous			
General:			
American Council on Ed. Dues	200.00		
Central Office Items	464.10		
Office Services	799.49		
Bond for Treasurer & Miscellaneous	757.46		
Investment—Savings Bank Deposit	4,000.00	6,221.05	
Reconciled Accounts (Collect.)		922.87	106,154.87



AVA Assets

The assets of the AVA show 38.2 per cent of the total in the Life Membership fund, with other amounts in bonds and only 8.4 per cent in the bank account. Only 3.4 per cent is available for current use.



AVA Special Committees

7.2 per cent of the total income is used for the various committees, as shown here.

American Vocational Journal

Printing and Mailing Journal	58,574.89	
Engravings	6,525.87	
Salaries	7,624.19	
Editorial Board Travel	455.56	
Maintenance, Mailing List	1,401.36	
Postage	1,734.42	
Office Rent	600.00	
Advertisement Commissions	2,387.70	
Special Art Work	821.36	
Telephone and Telegraph	267.57	
Miscellaneous	699.64	81,082.56

Annual Convention

Commercial Exhibits	12,055.75	
Convention Program	4,219.39	
Entertainment and Special Dinners	1,475.65	
Honorariums and Section Programs	1,666.99	
Telephone and Telegraph Service	160.35	
Travel	310.82	
Publicity	233.38	
Refunds on Exhibit Rentals	166.50	
Convention Printing and Postage	682.26	
Miscellaneous	802.34	21,773.43

Committees

Publications and Information		
Salaries	1,812.66	
Printing Booklets	4,770.40	
Printing—General	300.00	
Postage	647.98	
Travel	416.72	
Office Rent	300.00	
Express Charges, Tel. and Teleg.	255.75	
Miscellaneous	650.00	9,153.51
Program Development		
Travel, Communication, Postage, etc.	4,110.12	4,110.12
Special Committees		
Agricultural	872.35	
Armed Forces Relations	547.98	
A.I.A.-A.V.A.	297.44	
Automotive	104.33	
Business Education	888.18	
Civil Defense—Vocational Education	5,969.51	
Conference of National Org.	388.16	
Constitution Revisions	676.06	
Distributive Education	1,464.20	
Home Economics Education	983.27	
Industrial Arts	965.25	
Labor-Management Relations	289.79	
Membership and Awards	1,173.01	
Safety Education	175.99	
Trade and Industrial Education	1,800.04	16,595.56
		29,859.19
TOTAL EXPENDITURES		$238,880.05
Balance in Bank, November 30, 1957		12,542.76
		$251,422.81

TOTAL ASSETS AS OF NOVEMBER 30, 1957

Balance in Bank, November 30, 1957		12,542.76
U. S. Savings Bonds (Series K) Pur. Feb. '55—10M	9,690.00	
U. S. Savings Bonds (Series K) Pur. Mar. '56—5M	4,895.00	
U. S. Savings Bonds (Series G) Pur. Dec. '49—5M	4,835.00	
U. S. Savings Bonds (Series G) Pur. Apr. '50—10M	9,640.00	
U. S. Savings Bonds (Series G) Pur. Jan. '51—4M	3,832.00	
U. S. Treasury Bonds, 3%—1955 Pur. Feb. '55—14M	14,000.00	
U. S. Treasury Bonds, 2½%—'64-'69	500.00	
Baltimore Federal Savings & Loan—Int. 3½%	10,000.00	
Vermont Federal Savings & Loan—Int. 3½%	3,874.89	
Savings Bank Deposit—Int. 2½%	1,017.61	
Total Investments	$62,284.50	
Active Life Membership Fund	57,135.50	
Balance—AVA Reserve Fund		5,149.00
Inventory of Office Equipment (July 31, 1957)		12,182.45
TOTAL ASSETS (Excluding Life Memberships)		$ 29,874.21

How Vocational Agriculture SERVES IN IRAN

By Jess S. Smith,
Vocational Education Advisor,
USOM/I—Meshed

IRANIANS REFER TO America as *The Other Side of the World.* The province of Khorassan, in which the city of Meshed is located, is almost exactly on the other side of the world from southwestern United States. It comprises an area of about 124,000 square miles and has a population of approximately 3,000,000.

Meshed (altitude 3,200 feet) is located about 45 miles from the Soviet frontier and 153 miles from the Afghanistan border. It is the closest U. S. Foreign Service post to the U.S.S.R. The city numbers 242,000 inhabitants, mostly Shi'a Moslems.

Meshed is the holy city of Iran. The gold-domed shrine of Imam Reza, the Eighth Imam, dominates the city both physically and spiritually. About 500,000 pilgrims visit this shrine each season. On a summer day, around the approaches to the shrine, one can see Arabs, Turkomen, Kazaks, Afghans, Tajiks, Pakistanis and Persians in their native dress. There are two sections to the city. The new section has broad asphalted avenues lined with trees. The older part of the city is veined with narrow alleys, cobbled or unpaved, and every house is enclosed by a mud wall. Shops and covered bazaars line the business area. Here one can purchase anything from beautiful Persian rugs to live chickens.

The traffic is interesting—a mixture of modern with ancient. Modern taxis and trucks compete for right of way with donkeys, sheep, horse-drawn droskeys and camel caravans. The fact that the pedestrians prefer to use the middle of the street adds to the confusion and helps to develop skillful taxi drivers.

THIS IS A LAND of bleak plateaus, plains, deserts and beautiful valleys. On the west is a desert region called Dashte-Kavir. It is called, by some, the most arid area on earth. Across this desert blows a summer wind known as "Sistan Wind." It often reaches a velocity of over 70 miles per hour and may blow intermittently for as long as three months. Camel caravans are used to transport goods across this desert. The northern plains are broken by two wind-swept mountain barriers, the Elburz and Paropamisus ranges. On the plains and foot hills of this region are pastured large flocks of sheep, herds of native cattle and camels. The people of this region are noted for their horsemanship. They have developed a breed of beautiful horses known as the Tourkmans.

Between these two mountain ranges is a wide fertile valley. This is one of the best agricultural regions in Iran. The annual precipitation is under ten inches; so water is the limiting factor to agriculture. However, winter snows in the mountains make irrigation possible. This mountain water is brought down to the valley in a system of underground tunnels, called Ghanats. This system has been used in Iran for over 2000 years. Where the land can be irrigated all types of fruit may be grown.

At Tabas, a desert oasis in southern Khorassan, one can find dates, oranges, lemons, peaches, pomegranates, grapes, quince, and apples growing simultaneously. The principal crops, besides fruit, are vegetables, sugar beets, cotton, small grains and alfalfa.

Mr. Smith is a former President of the National Vocational Agricultural Teachers Association.

THE RURAL village people and nomad tribes need and want education. The greatest obstacle to rural education in Iran, at present, is lack of teachers who will work with these village and tribes people. The Ministry of Education at Meshed is attempting to meet this problem by recruiting students from the villages and giving them two years of vocational agriculture training.

A Vocational Agriculture Teachers Training College, developed with U.S. aid, is located about four miles from the city. These village boys live in a dormitory and board at the school. Food for the school kitchen is raised on a 200 hectare farm that is part of the school setup. The students attend classes half days and work on the farm half of each day.

One of the objectives of vocational training is to teach these boys that it is honorable to work with one's hands. By doing the actual farm work they learn how to transfer classroom theory into actual practice. This ability they must have if they are to be successful as village teachers.

Besides raising the needed food for the school the students have set out a large orchard. They are raising several breeds of American chickens for distribution to village schools. They also raise cotton, sugar beets and alfalfa for sale. Demonstration projects are carried on in the use of fertilizers, irrigation, forest planting and soil erosion control. In the farm shop they make small tools, learn to repair machinery and farm equipment and do some village crafts.

BEFORE BEING selected to attend this school a boy must sign an agreement that he will teach in a vocational agriculture village school for five years. This is to insure the Ministry of Education that his training will help the country. After graduation these boys are sent as teachers to small village or tribal schools. A few are given positions as extension agents in the rural areas.

Each village vocational agriculture school has some land and water for irrigation. Here they teach and demonstrate to the village people the new agricultural practices they have learned at the Meshed School.

This school near Meshed, called Torogh school, is not just to train teachers but is also a research center in agriculture for Khorassan. Plant Science is erecting a building for storage of proven varieties of different seeds tested on the school farm. These certified seeds will be distributed to the village farmers through their village agriculture teacher and extension agents. Because sheep raising is important in much of Khorassan, the school is building a sheep barn so students can be taught improved methods in sheep management. A wool improvement program is being carried on by the Live Stock Bonghah through the crossing of Rambouillet rams on native ewes. A dairy barn and artificial insemination laboratory is under construction. The program of improving cattle by crossing the native cows with pure Brown Swiss bulls has proven very successful.

IN THE PROVINCE of Khorassan about 80 per cent of the people are engaged in agriculture or animal husbandry. Excluding the nomadic tribes, the settlement pattern corresponds roughly to that of mediaeval Europe. The peasants live in a village and farm the adjacent land. There are about 8,000 villages in this province. Some of the smaller villages do not have a school. Others have a one room building built from mud and straw. The only furnishings in this school will be a few wooden benches and a teacher's desk.

In some of the larger villages there are fairly good school buildings. The tribes move with their herds and flocks. Their school will be a tent, or, in good weather, classes may be held out of doors. There are never enough books and equipment. The Ministry of Education is trying to supply books as rapidly as they can get them written and printed. In some villages, adult classes are held just to teach the adults to read and write.

This program, introduced by Point Four, is now being handled entirely by the Government of Iran. More than 200,000 adults have been taught to read, and it is expected that 300,000 more will learn during the present year. In one village visited by the American Education Adviser every person was attending classes, either in the regular day school or in night classes that were being taught by Fundamental Education leaders.

FOR A VILLAGE BOY to be selected to attend the Meshed school, or any school higher than village grade, is considered a great honor. This will be hard for American boys and girls to understand. The American University of Beirut recently sent word that it would accept applications for 40 students to be selected from all the provinces of Iran. Since there are ten provinces in Iran the quota for Khorassan would be four. In order to apply a boy must have a good speaking and reading knowledge of English. Over 80 boys from the Meshed area have filled out applications to take the entrance examination.

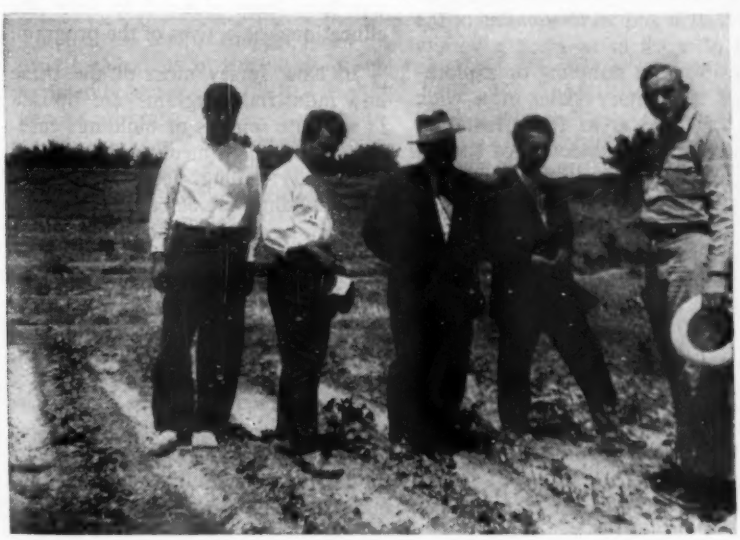
Iran possesses great potential natural resources. Besides oil, there are known deposits of iron, coal, copper, lead, chromite, sulfur, salt, turquoise, rubies and marble. Except for oil, these resources have not been developed because of lack of capital, know-how and transportation.

THE TEACHING of new agriculture practices will improve the fertility of the land, increase its water holding capacity and help to check erosion. This will mean more income for both peasant and landlord. Improved income will raise the standard of living. Industry will develop. This creates a need for markets, and markets must have improved roads and transportation.

Education, Agriculture and Public Health are cooperating to aid the people of Iran in solving their problems. These three groups are working together under one program known as Community Development, which was introduced by Point Four. Its purpose is to raise the economic standard, improve sanitation and increase the rate of literacy of the people in this land of the Middle East.

The author at work—

The author, r., and Engineer Zaringhalm, Iranian Vocational Supervisor (l.), discuss a new method of planting cotton with three Iranian vocational agriculture teachers at the vocational agriculture school near Gonabad.



Here, Mr. Smith shows a student how to plant American garden seeds, at Iran's Meshed Vocational Ag Teacher Training School.

T & I and Industrial Arts: *a Comparison*

EVERY PERSON engaged in industrial arts and trade and industrial education knows that the future of these programs depends to a great extent upon a general acceptance of clear-cut objectives for each of the two fields.

Perhaps a general analysis and comparison of the factors involved in each program will assist us in reaching a common understanding and a firm basis for constructive relationships. We trust that the comparisons have not been over-simplified.

At the very outset, I want to make very clear my personal convictions about industrial arts and trade and industrial education—a point of view that I have held throughout my 38 years in vocational education.

I believe that there is an important place in education for both industrial arts and trade and industrial education and I believe that if the valid objectives of each are clearly defined and conscientiously observed they can develop side by side without material overlapping or conflict and with mutual benefits.

Fortunately, this belief has been shared by the state supervisors of industrial arts and trade and industrial education in New Jersey over a long period of years and has resulted in generally good working relationships at state and local levels. Each of us tries to be a good salesman for the other supervisors' program as well as our own. . . .

ALTHOUGH BOTH industrial arts and trade and industrial education are part of the total educational program in a city, county, or state, there are and should be clearly defined differences in the nature and scope of the two types of education.

Trade, industrial, and technical education at the secondary school level is essentially *specialized* education in spite of the fact that certain important areas of general subject matter such as history, social studies and English are provided in the program. Preparation for skilled employment in specific trades, occupations, or services is the predominant function of the training. It is not a program for everybody in the secondary schools. It is or should be for a limited number of students who, because of their interest, ability, and aptitude, are able to profit by the training, achieve course objectives and qualify for employment in the specific trades for which they have received training. It is essentially terminal education.

Industrial arts education is an important facet of *general* education. It has a contribution to make to *all pupils* in the high school whether they are preparing to become professional workers, business men and women, factory workers, skilled artisans, or housewives. Since it is for *all* of these groups it must emphasize much *more* than industrial knowledge and experiences. Industrial arts is not essentially terminal education. It is as important to the prospective law or medical student as it is to students who enter vocational schools or jobs.

OBJECTIVES are not mere words placed on paper to satisfy the demands of "top brass" in the secondary schools. They should influence every phase of the program.

The major objective of trade and industrial education is to prepare for immediate entrance into gainful employment through the development of a wide range of skills in the specific trade, technical or service occupation for which the training was designed.

Industrial arts education on the other hand has or should have as its major general education objectives at the secondary school level as well as at the elementary school level, an *appreciation* and *understanding* of the world of work in as great a variety as possible; the sampling or exploration of elementary skills in a wide range of trade areas for orientation purposes; the *identification* of special skills, abilities, and aptitudes that may help students in determining career goals and provide a basis for specific guidance into specialized training; the *development* of consumer judgments regarding design and construction and the *stimulation* of leisure time activities . . .

Taken from an address presented by Arthur J. Wrigley at the 1957 AVA Convention. Mr. Wrigley is N. J. Supervisor of T. & I. Education and through the years has served AVA in many leadership roles.

Trade and industrial education includes in its objectives the mastery of extensive instruction in the mathematics, science, drawing and blueprint reading *related* and *applied* to a specific trade field. This application approach is one of the best means of preparing trade and industrial students for future progress and promotion in their chosen fields in this increasingly technological age.

Industrial arts usually has no direct responsibility for such courses in the high school. These courses are usually general in nature with little application to the industrial fields. If the administrators and instructors of these subjects in the secondary schools were willing to utilize industrial arts projects and experiences as a basis for illustrating and applying principles of mathematics and science, the subjects would probably have more lasting values for all students in the high schools. Many industrial arts instructors have attempted to fill this gap by providing some related instruction.

Both trade and industrial education and industrial arts subscribe to the objectives of developing good work habits and attitudes and developing good citizens in the school and outside of the school. The settings and approaches may differ somewhat but objectives are the same.

IN ANY PROGRAM of education the instruction is more effective if the buildings, shops and laboratory facilities have been planned to meet the educational objectives of the program.

In New Jersey most of the trade and industrial programs are housed in separate schools or buildings carefully designed to meet predetermined industrial training needs. Some of these buildings are elaborate, but most of them, particularly the shops, are of factory type construction. They reflect an industrial atmosphere in terms of space and shape requirements, working facilities and similar items.

More and more industrial arts shops, although they are located in general high schools, are also being designed in accordance with the same type of careful planning. The shops may be smaller because of the type

and quantity of equipment required or they may vary.

EQUIPMENT NEEDS are determined by the nature of program objectives and by an analysis of the skills to be taught.

In trade and industrial programs where an effort is made to provide an industrial atmosphere in which students may develop extensive trade skills which will be immediately transferable to the work situation upon graduation, the power equipment and basic tools are similar in size and quantity to those found in industry, and there must be sufficient numbers of each type of equipment to provide scheduled work opportunities for the pupils in training.

The industrial arts objectives call for the sampling of many occupational and leisure time activities. Appreciation, orientation and the discovery of aptitudes are stressed. Many of these activities can best be satisfied in general shops with smaller and less expensive equipment than is required in the typical trade and industrial shop. Emphasis on principles is the primary goal. When and if unit shops are used in the industrial arts program the equipment is usually more substantial. Even in these cases, however, the equipment need not be comparable to that of trade and industrial shops if "rotation" and "sampling" rather than "specialization" are emphasized.

AN INSTRUCTOR in either program is truly effective only to the extent that his instruction produces the results called for in the carefully formulated objectives established for him and his program.

The trade and industrial shop instructor because of his responsibility of developing marketable skills must have had broad and effective work or occupational experience in a specific trade field. In New Jersey, eight years of such experience is the minimum requirement for certification. This type of work background combined with comprehensive teacher training is necessary to meet the "specialization" objective.

Industrial arts general shop instructors will probably be better instructors if they have had some work experience in one or more industrial situations. However, this is not a basic necessity if their teacher training shop experiences have been adequate. Industrial arts unit shop instructors could probably profit from more extensive trade experience, but such an instructor should constantly keep in mind the general education objectives of his course and avoid "riding his hobby" to the point where his course and his efforts approach the vocational objective.

Trade and industrial related subjects instructors must possess trade background as a foundation for the application of their instruction.

Industrial arts instructors are not usually responsible for extensive related instruction, but when they do offer incidental instruction of this type, some industrial background should be of value to them.

General subjects instructors in a trade and industrial school usually *stress* the proper preparation for living in an industrial democracy and they learn to assess student needs through constant association with shop and related instructors in the school.

The industrial arts instructor has some opportunity for carrying out this function but the general subject instructor in the general high school does not usually call upon him for assistance.

STUDENTS SHOULD BE selected or assigned in terms of the broad and specific objectives of the programs.

Trade and industrial education students preparing for successful entrance into a specific trade field are or should be carefully selected and screened in terms of interest, capacity and aptitude. Each student should be able to profit from the instruction and possess all of the age and training qualifications necessary for employment in the trade of his choice immediately after graduation from the trade preparatory program. Presumably, the entrance requirements for an electronics course would be somewhat different from those for a course in painting and decorating. The effectiveness of any trade and industrial course in our state is measured primarily by the success of its graduates in entering and progressing in their chosen trades or occupations.

If an industrial arts program subscribes to the objective of providing appreciations, understandings and experiences in a broad variety of occupational and avocational fields for *all of the students*—boys and girls in the secondary schools—selection is not or should not be an overwhelming problem. All students should have an opportunity to profit from industrial arts experiences in accordance with their general education needs. The needs of the college preparatory, business education students or any other group should be provided for. This calls for flexible curricula and success standards in keeping with the objectives established for each group.

GOOD INSTRUCTION is dependent to a great extent upon the presence of a good instructor, appropriate facilities and carefully prepared instructional materials. Both trade and industrial education and industrial arts have made tremendous strides in terms of instructional material developed and used during the past ten years. However, there are differences in the approaches used in developing these materials.

Instructional materials and particularly individual instruction sheets used in trade and industrial programs over the years have become fairly well standardized as to format. All materials are based on a complete analysis of a trade or occupation including not only the skills involved but the related areas, such as mathematics and science, as well. The analysis items are then organized and arranged for effective instruction and the curriculum including both skilled and related instruction is developed. The instruction sheets are based primarily on information provided by the analysis, and in combination they provide the instruction necessary for success in each student's trade or technical employment.

In industrial arts, the form of instruction sheets is similar to that used in trade and industrial programs. However, the analysis approach is used only to a limited extent because of the varied objectives that must be considered. Carefully selected expe-

riences are chosen to meet each objective and even where industrial processes are involved *depth* is or should be sacrificed to *range* and *variety*. Instruction sheets are then provided for each of the experiences selected.

INDIVIDUAL INSTRUCTION is stressed in both trade and industrial education and industrial arts. This approach provides an opportunity of encouraging each student to progress as rapidly as his capacity permits and allows the instructor to fit the projects and the instruction to the individual needs and objectives of students. The demonstration and discussion methods are used effectively in both programs. Emphasis on individual instruction does not eliminate the possibility of occasional group conferences and discussions. In trade and industrial education, the individual instruction approach has been found to be valuable in related instruction as well as in shop skill situations.

THE TIME devoted to instruction in the two types of programs is indicative of the difference in their objectives.

The "specialized" trade and industrial type "A" program schedules approximately three-fourths of each school day for shop and related instruction for a specific trade or occupation. The type "B" program schedules at least three hours daily for the same purpose. The course content determines the number of years each course should be operated to assure successful entrance into employment.

The full programs of most general high school students prevent any such extensive scheduling for industrial arts classes and activities. Theoretically, if *all* of the high school students are to benefit from industrial arts offerings in keeping with broad objectives, comparatively little time can be scheduled for any one student.

In some cases, I understand that large segments of the high school population are denied industrial arts opportunities because shop time is devoted to a comparatively small number of students who may take industrial arts for as many as ten periods per week in a single shop course. In such situations, I would like to raise a naive question:

Can all of the general education objectives for industrial arts in a high school be met under these conditions and does this concentrated instruction in a single shop field imply trade preparatory objectives? I believe that this is the nub of whatever feeling exists between trade and industrial and industrial arts educators. It is certainly a problem that should be resolved in terms of valid objectives.

ALL EDUCATION is of a "guidance" nature. In New Jersey, guidance counselors are attached to each vocational school. They help students to make logical changes and adjustments in their trade training programs after their enrollment in the vocational school if such changes are compatible with student interest and progress.

The industrial arts instructor, although he is not primarily responsible for guidance, can render great service to selected students with clearly defined interests and aptitudes by encouraging and stimulating them to enter specialized training in trade and industrial programs.

ONE MAJOR PROOF of the value of trade and industrial education is the successful entrance and progress of graduates in their chosen trades and occupations. The vocational school personnel, from director to teacher, assume responsibilities for such placement and follow-up. Close contacts of this type between school and industry provide many helpful clues.

Job placement and follow-up are not usually functions of the industrial arts instructor. However, his records should be of great value to any high school placement department and certainly to guidance personnel who are in a position to recommend students to the vocational schools.

TRADE AND INDUSTRIAL education programs are usually supplemented by a number of representative craft committees. These committees help the school to keep "on the beam" as far as its specialized objectives are concerned. They help to keep each program functional in terms of the trade and industrial needs of the community.

Generally, such committees are not used in industrial arts programs because of the general education objectives to which they subscribe. However, many in this group can testify to the development and use of lay advisory committees and to their value in developing broad, and sound, programs.

TRADE AND industrial education, since 1917, has been liberally supported by federal funds appropriated for the purpose of stimulating specialized training that will prepare new workers for successful entrance into trade and industrial employment and develop greater proficiency in workers already engaged in such employment. Perhaps the most important outcome of this federal aid has been the establishment nationally of a set of clearly defined training objectives, basic standards, and a uniform philosophy, reflected in state plans which are sufficiently flexible to meet the conditions and needs existing in each state. This has resulted in a common ideology and general uniformity of approach in developing trade and industrial education programs.

Industrial arts, as part of the total general education program in our schools, has not received federal financial assistance. The objectives and goals of this program have not been defined by federal legislation. This task has been the responsibility of the individual states and municipalities.

As a result of this condition, leaders in industrial arts education have emerged in all parts of the country, and most of these leaders now subscribe to a common philosophy similar to that which has been implied in this paper. This is a notable achievement in a democracy such as ours. However, misunderstandings between trade and industrial education and industrial arts education may conceivably continue or develop in isolated instances where instructors and supervisors of industrial arts do not subscribe to the common code developed by the majority of leaders in this field or do not apply the principles of this code in actual teaching situations.

The universal adoption of such a code, even without the backing of federal financial aid and legislation, seems to be the major goal to be attained by industrial arts in the immediate future.

Opportunity?...*of course*...try

Creative Selling

"THERE ISN'T ENOUGH money owned by the students of this class to buy the experience and know-how of your teachers in this course, but you can have it "for free" by attending here regularly!"

The above remark was not made, but could very easily have been, at the registration and first night meeting of the Distributive Education Class in Creative Selling in Fort Lauderdale, Florida. Eighteen successful business men, and one business woman, members of the Fort Lauderdale Sales Executives Club, made up the faculty of the class.

"If you don't like an instructor, or find him dull . . . and you may . . . *don't worry!* You won't have to put up with him long for he will only teach one class."

This remark *was* made the first night of the 16-week program . . . for variety and drawing upon the experience of many successful sales managers are several of the principal drawing cards of this course. New faces, a change of pace, different methods of presentation, keep the students guessing. THE GOAL? Never a dull moment in the teaching of the world's most fascinating and most profitable profession, SALESMANSHIP.

TRAINING AIDS of all kinds are used to the best advantage. Since each instructor is accustomed to conducting sales meetings for his own staff, instruction comes easy, and a stranger in the class might easily conclude that he was attending a sales meeting. Actually he is! For the class is "buying" sales information, and the instructor is selling his subject.

Let's look in on a class. At 7:30 p.m. when the instructor approaches the front of the room, a recording of *Opportunity* is turned on, and the class starts off with a musical note. The recording takes several minutes, reminding the listeners that opportunity is up to the individual and how he uses his talents. Then comes the instructor who talks about the hidden abilities in each of us and how to concentrate our efforts and be a success in the sales field. One hour has passed, and the class is given a ten-minute break. Toilet facilities for men and women, a fountain and a coke machine are part of the air-conditioned classroom, and a coffee bar is only one block away.

Roll is called at the start of the second hour. The students are advised that "This is done only because the school wants this information, but the instructors are not concerned whether you show up or not; they feel that the student who is not already a success is losing money any time he misses a class." An unorthodox approach to motivation for a good attendance, you say? Yes, but it works for the students know that the teachers profit in no way, other than the experience of teaching, and that each teacher is giving his time and best effort as a civic service and because he wishes to raise the level of performance in his profession.

After the attendance is checked, a series of slides is shown, continuing the discourse of the first hour. Mimeographed sheets, with blank spaces to be completed, are distributed to the students, and are filled in as the slides are shown. Perhaps the class runs 15 minutes over the two hours planned. Most of them do.

The reader of this article and I both know that all subjects will not lend themselves to this type of approach. Agreed! How else to keep the class "lively"? A film called *The Importance of Selling* is rented from the National Sales Executives, Inc., in New York City, to underscore the broad field of salesmanship, and its many opportunities, and to remind us whatever we do for a living, as doctor, teacher, housewife, or what have you, we are all salesmen . . . either good or bad.

A lecture may be outlined on the blackboard. Instead of allowing the student to copy or read ahead, the entire board is covered with sheets of newspaper, held in place by masking tape. The covering job is built from the bottom of the blackboard up, and as the lecture progresses the instructor peels off the sheets, top to bottom, to expose only those remarks he is discussing at that moment.

Or an oravisual easel, with a large pad of paper is used, with one item to a sheet, covering the evening's topic. (Lectures so prepared are made to use repeatedly, without additional work on the visual aid.)

Or an overhead projector throws the writing of the teacher on a large movie screen behind him, as he faces the class, and keeps eye-contact.

Material purchased by the Fort Lauderdale Sales Executives Club and free material supplied by the telephone company are distributed to the class.

It is obvious to all in the class that a great effort is made for showmanship in this instruction. Enthusiasm

R. W. Rickenbrode uses a flannel board to present "selling as a career"

and a thorough knowledge of the subject . . . "musts" for successful salesmanship . . . are characteristics of the teachers, as they go about "selling" their subject.

SO MUCH for the conduct of the class. To explain how this course was born will explain its organization. So let's return to late August 1956. A phone call from the D. E. Coordinator, Larry Paige, to the president of the newly organized Fort Lauderdale Sales Executives Club, asking if the club would be interested in participating in the D. E. program by conducting a class in selling, was met with a startling and enthusiastic reply in the affirmative. WOULD WE? Brother, we were just looking for the opportunity to get our teeth in a program which would interest our members and would help to carry out several of the club objectives . . . to call favorable attention to selling as a profession and to improve the level of selling in our community by passing on some of our know-how. One member of the "faculty" was certified as the instructor and made responsible for the proper conduct of the class. The directors of the Sales Executives Club prepared a ten-lecture program outline, and since there was no single individual prepared to teach the entire program, club members volunteered for the subjects which they desired to teach. This avoided overworking any one individual and enabled each teacher to do a thorough job of preparation for his class. Pride in his club, and appreciation for the honor of being selected to teach a class insured a top performance by each teacher. This proved a "boom" to the club, for half the club membership was participating in this activity. And the writer will be the first to say that the experience did more for the teachers than it did for the students. We had more offers to teach than classes available in our second go-round.

September and our first class. The room at the high school held 35 chairs, and 30 minutes before class was scheduled to start, only standing room remained. Extra chairs were moved in, and students were turned away, or left when they saw the mob. An effort to find a new home during the next few days was successful, and the local Air Force Reserve Center was made available for the class. Total registration for the first series of ten lectures was 86, the largest class in the entire night school vocational and adult program.

JANUARY AND we were ready for the second go-round. There were some subjects we wanted to discuss more fully so we increased our classes from ten to sixteen, added a book and instead of a school registration fee of $1.50 we charged $5.00 which included a $4.00 textbook. To encourage discussion we limited the second class to 50, but found that a mistake for the class is principally a lecture course.

To aid others who may desire to organize such a course and to save them time, the arrangement of the Creative Selling class subjects is:

Registration and introduction of the course
The Importance of Selling (movie)
Women in Selling (female teacher)
Selling as a Career
Developing a Sales Personality
Enthusiasm
Why People Buy
Know Your Product
Prospecting
Achieving Your Goal
Planning the Sale
Pre-Approach
Approach
Securing the Interview
Arousing Interest
Creating Desire
How to Handle Objections
How to Close
How to Build Your Presentation
Selling Techniques (tape recorded)
How to Use Sales Tools
Sales Psychology and Customer Relations
Sales Letter Writing
Self Management and the Next Step —Sales Management

by Grant L. Clarke

'57 President, Fort Lauderdale, Fla., Sales Executives; member, Statewide Advisory Committee in DE; Creative Selling Instructor

The faculty for the course in creative selling were executives or sales managers representing such businesses as printing, electrical appliances, laundry, real estate, aircraft sales and service, telephone company, paint, boat sales, office equipment, automobile dealer, nutrilite food supplement, outdoor advertising panels, Coca-Cola, automobile club and cash register company.

This course was not promoted by the school. One newspaper write-up two days before each class was the only publicity needed. Students attended who lived 45 miles away (West Palm Beach). There were half a dozen man and wife teams. About a third of the class were ladies. Interest expressed by the students has resulted in plans for two additional courses, one in solving sales problems and the other in sales management. We plan to repeat the basic sales course each fall and spring.

There's a climax to this story. Each year the National Sales Executives conducts a contest in many activities carried on by the member clubs. The Fort Lauderdale Sales Executives Club entered the D. E. Contest and with its story of the program was selected as the winning club with membership under 75 members. A grand award is made for the outstanding entry of 21 different activities, and the Fort Lauderdale Sales Executives Club with its D. E. Program was selected the outstanding club under 75 members in the world. Boy, do we love our D. E. Coordinator, Larry Paige, for the opportunity he gave us!

Jean Rickenbrode talks about "women in selling . . ."

Theories of

Industrial Arts Education

By Howard O. Reed

SEVERAL THEORIES seem to be emerging in industrial arts education. A *theory* is a particular view of something to be done, the method of doing it, or a proposed explanation when its status is still conjectural. A theory is in contrast to well established propositions that are regarded as matters of actual fact, a system of rules, or principles.

One's philosophy should be based on a system of principles for his guidance in practical affairs. A person's objectives should be based on a set of principles. Before subscribing to a given theory one should continually examine it for its soundness, factualness, or truthfulness.

There may be very close relationships between theories, philosophy, and objectives. Philosophy of industrial arts education should be concerned with what ought-to-be with respect to such factors as content, methods, and shop organization. It should lend quality. Objectives should be an expression of intention of accomplishment in the light of what ought-to-be. They should give direction. Theories of industrial arts education may state that under a particular set of conditions certain things should be accomplished. They deal with views, concepts, and/or explanations. Some of the emerging theories in our field are stated here.

SUBJECT MATTER for industrial arts should be collected, analyzed, and selected for instructional purposes. This plan should assure that the pupils will receive instruction in the fundamentals of certain selected industries. Projects may frequently be assigned to assure complete coverage of the subject matter thus selected.

Selection of basic subject matter in advance of instruction is not important. Pupil wants or needs will lead the pupil to explore and through his exploration subject matter will be learned. Problem solving receives emphasis with respect to project selection, planning, and completing.

Industrial arts is a *method* and through the activities experienced by the pupils greater meaning is given to the more abstract symbols such as numbers, letters of the alphabet, and printed or written words. This theory seems to be more significant for the elementary grades, although it may exist for all levels, including the adult.

Industrial arts is taught to inform pupils of our industries and material cultures of the past and present. Handicrafts in the industrial arts program may be justified since they were prominent when much manufacturing was done in the home. They are still commonplace in several foreign countries. Some justification may be made also for handicrafts for recreational purposes in this country.)

Industrial arts should provide a simulated, industrial environment in which pupils may have an opportunity to develop socially into more mature individuals. Practice in democratic processes should be encouraged. Social harmony, under more-or-less crowded conditions, should be the aim.

Industrial arts help pupils to read and understand drawings similar to those used in industry and to develop some ability to express their own ideas by making such drawings.

INDUSTRIAL ARTS pupils become more self-sufficient home owners and operators when one or more units of instruction emphasize household development and maintenance.

Industrial arts pupils are provided an opportunity for vocational try-out experiences, whereby they learn of job requirements as well as their own aptitudes.

Industrial arts pupils develop desirable concepts with respect to the selection, care, and use of devices for the home as well as tools and machines common to industry.

Industrial arts pupils learn to plan, think rationally, and to solve problems involving elements common to our basic industries and home appliances.

If some of the activities taught in industrial arts are continued on a hobby basis beyond school, the recreational effects promote improved mental health.

Demonstrations by the teacher or other qualified persons provide efficiency in industrial arts instruction and extend understandings and skills.

Pupils are "spoon-fed" through formalized demonstrations; youth should be left to discover the heritage of their culture and to solve their own problems.

THE COMPREHENSIVE general shop is best organized with not more than two or three work stations for a given area. About a fourth to a third more work stations than the maximum class enrollment should be provided to allow for freedom of pupil progression to needed work stations.

Diversity in a comprehensive general shop can best be provided by having sufficient workbench stations for the maximum size class, with auxiliary equipment and service for diversification. Pupils are then rotated through these stations so that they will have experience with all units.

Diversified general shops should be limited to three or four major activities with each of the areas fully manned to provide for maximum enrollment.

The groups are rotated at more-or-less equal time intervals to provide experiences in all activities.

Industrial arts teachers who aspire to become master teachers carefully try out and evaluate these several theories. Careful study will reveal conflict in these theories, but it is believed that a complete understanding of them will result in unique contributions to teaching.

Dr. Reed is Head, Industrial Arts Department, Iowa State Teachers College, Cedar Falls.

From the U. S. Office—

More than 200 State, district, city and assistant supervisors of home economics education from 47 States, Puerto Rico and Alaska participated in a National Conference for Supervisors sponsored by the Home Economics Education Branch, December 2-6, held in Washington, D. C. Among the conference consultants were Dr. Stephen M. Corey, Dean, Teachers College, Columbia University, whose contribution centered on "What Research Tells Us About Learning." Dr. Hollis A. Moore, Jr., American Association of School Administrators and Dr. Jane Franseth, Office of Education, pointed out "What Research Tells Us About Administrative and Supervisory Functions." Projected home economics programs based on present day issues and on research findings were explored during group discussions. Essential steps to meet new challenges were considered in relation to secondary school programs, post high school programs, vocational-technical education, adult and college programs for the future.

* * *

Helen Powers and Barbara Fallon, Program Specialists, Practical Nurse Education, Trade and Industrial Education Branch, attended a two-day meeting of the Interagency Conference on Nursing Statistics held on December 2 and 3, in Washington, D. C. Included in the discussion of nursing statistics was the questionnaire prepared by the Practical Nurse Education Section of the Office of Education and the National League for Nursing to obtain data on number of practical nurse programs, graduates, and students enrolled in 1957.

* * *

Members of the Altrusa and Civitan Clubs of Burlington, North Carolina, heard a talk on "Trends in the Training and Employment of Women" presented by Mary S. Resh, Program Specialist, Trade and Industrial Education Branch, on the occasion of their joint meeting on November 26. Mrs. Resh discussed various trends which are shaping our future, and their impact on the expanding role of women in our economy and implications for vocational education.

* * *

G. Henry Richert and George Sanders, Program Specialists in Distributive Education, attended a meeting of representatives of agricultural-allied industries, organizations and educators, held at Washington, D. C. The National Sales Executives' "Farm Youth Program" was presented to the group and received enthusiastic support from all sides. The program proposes to carry out an educational program to alert farm youth their opportunities in the field of agricultural selling. Two tools were presented, a film which outlined the problem and showed the importance of the selling function to a vigorous and progressive agricultural economy and second a booklet, "There's a Future in Your Farm Background."

* * *

James H. Pearson, Assistant Commissioner for Vocational Education, participated in the 15th Annual Conference of Professional Agricultural Workers at Tuskegee Institute. The theme of the Conference was "Agricultural and Related Services for a Changing Rural Population." Mr. Pearson spoke on trends that have implications for vocational education.

* * *

Several members of the Trade and Industrial Education Branch met with Mr. Bernard Michaels, Labor Economist, Bureau of Labor Statistics, U. S. Department of Labor, on Friday, December 6, to review the draft of a report "Employment Outlook for Technicians." Of particular interest was the section dealing with training of technicians.

* * *

William Paul Gray, National Executive Secretary, Future Farmers of America, served as consultant at the first annual American Indian Youth Conference held at the Department of Interior on November 25-26. Delegates from tribes of Indians from all over the United States participated in discussing probems pertaining to youth delinquencies on the Indian reservations. As a result of this Conference, specific recommendations will be made through the Department of Interior to help improve the Indian youth situation through improved educational opportunities, both academic and vocational, and greater use being made of recreational facilities and direction to help the youth with their leisure time.

* * *

John P. Walsh, Director, Trade and Industrial Education Branch, was one of 50 educators invited by the Secretary of Labor to a national meeting on "Education and Employment," held in Washington, D. C., on November 12-13. Pointing out that conference discussion would be devoted to long-term projects of 10 to 20 years dealing with the quality of education and providing an adequate supply of trained personnel for industry, Secretary Mitchell stressed the problems of training in industry, the need for on-the-job training, the need for assembling instructional materials, and the need for a stepped-up program for training both apprentices and managers. He indicated that the responsibility of the Department of Labor, Bureau of Apprenticeship and Training, was primarily to promote apprentice training within industry and that the personnel of the Department were not educators.

* * *

A new publication "Chapter Handbook— For Organizations of High School Homemaking Students" is now available from the National Headquarters Office, Future Homemakers of America, Inc., Department of Health, Education, and Welfare. It is designed for use by chapter members and advisers as well as school administrators and advisory board members. It includes suggestions for coordinating class, chapter, and home experiences; effective leadership training techniques; ways of sharing responsibilities, determining objectives, choosing appropriate group activities, and ways to evaluate progress toward goals. The price is 65 cents per copy.

H. N. Hunsicker met in New York City December 12-14 with a group of State Supervisors and Teacher Trainers of the North Atlantic Region to complete work on a new record book for use by vocational agriculture students whose farming program requirements are met by supervised farm work experience. The group also began the preparation of a guide for use by teachers in obtaining satisfactory farm placement for students.

* * *

Richard S. Nelson, Program Specialist, Trade and Industrial Education Branch, participated in the Annual Conference of the New Mexico Education Association and spoke on the subject, "The Industrial World of Tomorrow." Following this presentation, he discussed with the Industrial Arts and Trade and Industrial Education Association groups the technological changes which are affecting the education and training of men and women, emphasizing the importance of redefining "skill" in order to meet the emerging needs of an era of new technology.

* * *

Serving as a member of the Committee on Legislation of the American Nurses Association, Vera P. Hansel, Chief, Practical Nurse Education, participated in a meeting held in New York to discuss the licensing of practical nurses.

* * *

"The Expansion and Development of Vocational Education" was the theme of a series of conferences held recently in Phoenix, Arizona. At the request of the Arizona State Department of Education and the Phoenix Union High School District, Richard S. Nelson, Program Specialist, Trade and Industrial Education Branch, served as consultant for these conferences. Training programs are being expanded to meet the rapidly growing industrial economy of the desert States, particularly in such fields as electronics, aircraft and light industry.

* * *

The Future Farmers of America staff has prepared copy and layout for a poster to be used by FFA chapters throughout the country in observance of National FFA Week, February 22-March 1. Forty thousand of the posters will be printed and distributed about January 1 to State FFA Advisors in quantities sufficient to supply four to each local chapter.

* * *

Dr. Marjorie Brown, Professor of Home Economics Education, Colorado State University, Fort Collins, joined the staff of the Home Economics Education Branch on December 1 as a consultant for special projects to be undertaken at headquarters.

* * *

Margaret Alexander, North Atlantic Regional Program Specialist in Home Economics, served as consultant for a graduate class at Teachers College, Columbia University, on December 17 to interpret the purpose and scope of the work of the Home Economics Education Branch; special studies and publications; and home economics throughout the world.

MASSACHUSETTS PAYS TRIBUTE TO THE JOURNAL

Resolutions passed at the 1957 Convention of the Massachusetts Vocational Association included the following:

"The Massachusetts Vocational Association, recognizing the superior leadership given by Dr. John J. Desmond, Jr. as Commissioner of Education in the Commonwealth of Massachusetts, wishes to record its appreciation of his dedicated service in the field of education.

"Whereas Dr. John J. Desmond, Jr. has been a distinct friend of Vocational Education, be it resolved that the members of this association express the gratitude of all their fellow-workers in the field and the hope that the years ahead may be very happy and rewarding.

"It is their wish that copies of this Resolution be spread on the minutes, given to Dr. Desmond and published in the AMERICAN VOCATIONAL JOURNAL.

"Whereas, the 50th Anniversary of Vocational Education in Massachusetts was fittingly observed in Northampton in October 1956, be it resolved that the members of this constituency express to the Steering Committee, the Officers, and to all committees and workers who participated in its program, our appreciation and recognition of the accomplishments of this outstanding historic convention.

"Whereas, the Editorial Staff of the AMERICAN VOCATIONAL JOURNAL has made possible excellent publicity recognizing the 50th Anniversary Year of Vocational Education, both in print and by spoken word, be it resolved that we express to them our appreciation of the tribute that has been thus paid to faithful pioneers and to our congressional leaders who through the years have upheld the program and philosophy of Vocational Education.

"Whereas the members of the Massachusetts Vocational Association firmly believe in the need of a more adequate and extensive program of vocational and practical arts education, be it resolved that the members give their whole-hearted support to the revised Area Vocational School Bill (S. 1298).

"Whereas the members of the Massachusetts Vocational Association enjoy the privileges and benefits of affiliation with professional organizations supporting vocational education, be it resolved that the members more effectively unite their efforts to aid the Vocational Education program in its essential task of preparing youth for efficient employment and leadership and successful democratic living.

The Resolutions Committee: P. Joseph Corrigan, Harold A. Mostrom, Angeline W. Forrest, Dorothy E. Howland.

North Dakota Business Educators Meet

The North Dakota Business Education Association held its annual meeting in Minot October 17. The president, Arthur Nelson, now on the faculty at the State Teachers College, Mankato, Minnesota, was unable to attend. In his absence, J. Bernard Busse, State Teachers College, Minot, acted at chairman.

NEW OFFICERS

ARKANSAS: Juanita Ford, Arkadelphia, President; James A. Jones, Little Rock, Executive Secretary. Vice Presidents: Howard Keeling, Newark; Mrs. Janive Blanchard, Walnut Ridge; Frank Pfeifer, Chidester; Walter Pruitt, Forrest City; Leon Vawter, College Heights; B. G. Stephens, Hot Springs; Joe Harper, Pine Bluff; Justin Richardson, Bald Knob.

FLORIDA: Stabley Lewis, Miami, President; Marion West, Hollywood, Treasurer; Lillian Spencer, Fort Pierce, Secretary; Mrs. Louise Minego, Tampa, Past President. Vice Presidents: D. A. Storms, Plant City, Agriculture; Mrs. Gertrude Mondheim, St. Petersburg, Business Education; Charlotte Nicholas, Tampa, Home Economics; Ellis Rasmussen, Tampa, Rehabilitation; L. N. Donnell, Pensacola, Trade and Industrial Education.

MARYLAND: Frank C. Gunderloy, Annapolis, President; Arthur Ahalt, College Park, First Vice President; E. Duncan Hyde, Baltimore, Second Vice President; Austin E. Grisriel, Kenwood, Secretary; Reuben F. Jones, Baltimore, Treasurer; Mabel S. Spencer, College Park, Past President.

MICHIGAN: A. John Kovac, Niles, President; Harold Walper, Monroe, Vice President; Louise McFarlane, East Detroit, Secretary; John Fritz, Comstock, Treasurer.

MISSOURI: John Mowrer, Unionville, President; Mrs. Rachel Owen, Columbia, Vice President; H. H. London, Columbia, Secretary-Treasurer.

NEW MEXICO: Nelson Lowrey, Albuquerque, President; William Bennett, Artesia, Vice President; W. B. Runge, Albuquerque, Secretary Treasurer.

NORTH DAKOTA: Mrs. Beulah Bute, Wahpeton, President; Edward Adams, Wahpeton, Vice President; Spencer Hokenson, Wahpeton, Secretary-Treasurer.

AVA Calls Joint Organizational Meeting

AVA's Labor - Management Relations Committee members met with representatives of the U. S. Chamber of Commerce, the National Association of Manufacturers and the AFL-CIO in Washington October 7.

Representing AVA were Samuel L. Fick, Vice President for Trade and Industrial Education; Lowell A. Burkett, Acting Executive Secretary; and J. F. Ingram, AVA Past President.

Others attending were John R. Miles, Manager of the Education Department of the Chamber; George H. Fern, Director of Education for NAM; and John E. Cosgrove, Assistant Director of Education for the AFL-CIO.

The role of trade and industrial education in developing skilled and technically trained manpower and possibilities of combining efforts to make the program more effective were discussion items.

The group agreed that additional meetings should be scheduled and recommended immediate planning for similar sessions at state and local levels.

AVA's Auditing Committee Reports for Fiscal '57

Attached is a copy of the detailed audit of Mr. Edward G. Shipley, Certified Public Accountant, for the fiscal year ending November 30, 1957. The AVA Treasurer will submit copies of his report to the members of the Executive Committee and a Financial Report will also be published in the A. V. JOURNAL for the information of the Members.

(signed) ROY G. FALES, *Chairman*
(signed) H. M. MCDONALD
(signed) NOBLE L. MOORE

Report of Auditing Review Committee
December 9, 1957

To the Executive Committee
and Members of the
American Vocational Association

The Auditing Review Committee appointed by the Executive Committee of the American Vocational Association has this day checked the report made by Mr. Edward Gettier Shipley, Certified Public Accountant, of Baltimore, Maryland, of the audit of cash receipts and disbursements for the year ending November 30, 1957.

In addition to the signed certificate of Mr. Shipley, the report contains

CERTIFICATE

Exhibit A: Consolidated Fund Balance Sheet, November 30, 1957
Exhibit B: Statement of Cash Receipts & Disbursements for Year ended November 30, 1957
Exhibit C: Statement of Investments. November 30, 1957.

In addition to the C.P.A. report, the Committee has reviewed the annual report of the Association Treasurer, Mr. Charles W. Sylvester of Baltimore, Maryland, which was made independently of the report of the C.P.A. The receipts and disbursements for the two reports were found to be identical. We feel that the system of internal checks of all receipts and disbursements and the requiring of the signatures of the President and Executive Secretary adequately safeguard the funds of the Association through numbered vouchers and numbered receipt forms.

The Committee concurs in the statements of the Certified Public Accountant that his examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as he considered necessary in the circumstances.

VVA Annual Meeting Features R. E. Bass

The annual meeting of the Virginia Vocational Association was held November 1 at Richmond. R. E. Bass, who came into office as AVA President December 1, spoke on *Trends of AVA Next Year.*

Dr. D. Y. Paschall, State Superintendent of Public Instruction, spoke on *Education and Business Horizons in Virginia.*

Around the Nation—

Bass Named "Man of the Year" by Southern Farm Magazine

R. Edward Bass, Virginia State Supervisor of Vocational Agriculture, and AVA President, has been honored by *The Progressive Farmer*, Southern Farm Magazine, as 1957 "Man of the Year in Service to Virginia Agriculture." Announcing the award in the January Carolinas-Virginia edition, *The Progressive Farmer* states:

"Vocational agriculture training is essential to farm boys in this day of scientific and mechanized farming. And, as is attested by his recent election as president of the American Vocational Association, Ed Bass, Virginia's state supervisor of vocational agriculture, is a top leader in this field.

"So outstanding were Ed's services during his 10 years as vo-ag teacher that he earned *The Progressive Farmer's* 'Master Teacher' award. During World War II he helped direct the State Food Production War Training program. Later he played an important role in organizing the alert and active Young Farmers of Virginia. He was also a leader in revamping the State FFA-FHA camp to improve its recreation-leadership training.

"Throughout his busy career Ed Bass has worked constantly to improve educational opportunities for rural youth. He has pressed for revisions in the vo-ag course of study to meet fast-changing farming conditions. And, having been born and reared on a Virginia farm himself, he has recognized training in farm management as the greatest need in farming today. To help vo-ag teachers improve their abilities to teach and serve in their communties, Ed directed 'in-service training' programs for them.

"Friendly, frank, hard-hitting Ed Bass has won a long list of honors in recognition of his 27 years of splendid service in vocational agriculture work. It's not these awards, though, that please him most. His greatest satisfaction lies in the knowledge that all over Virginia, young farmers—and some now not so young—are doing a better job of farming and living because they took vo-ag training that bore the stamp of his personality."

Georgia FFA Honors Inez Wallace

Inez Wallace, Georgia State Supervisor of Home Economics Education, was one of 23 who received Honorary Georgia Planter degrees during Georgia's annual FFA rally, held in Macon October 25 and 26. More than 2,000 were in attendance.

Others who were awarded the honorary degree included Mayor B. F. Merritt, Jr., of Macon; R. S. Wheeler, Dean of Instruction, University of Georgia College of Agriculture; J. G. Bryant and W. R. Brown, agricultural teacher-trainers, University of Georgia; and four vo-ag teachers—Oswell Smith, Patterson; O. W. Carter, Wadley; and J. A. Harris and M. T. McMurrain, Jasper.

FLORIDA LENDS A HAND IN NICARAGUA

by Roy F. Bergengren, Jr.

Editor's Note: Dr. Bergengren is head of the Department of Industrial Arts and Vocational Education at the University of Florida and serves as coordinator of foreign contracts for the university's College of Education.

In most of the free nations of the world, American universities are working in cooperation with the United States Government to provide technical assistance. With the advice and help of university staff members, leaders in other lands are modernizing highways, planning cities, improving agriculture, and expanding public education. Vocational and practical arts educators are playing an important role.

One of the many projects in industrial arts and vocational education has been functioning successfully in Nicaragua for more than two years and is scheduled for completion December 31. In the summer of 1954, the ministry of education in Nicaragua requested the University of Florida to assist with the development of industrial arts and vocational programs. The request came through the International Cooperation Administration, which financed a three-year contract between the university and the Servicio Cooperativo Interamericano de Educacion Publica, representative of the ministry and the ICA.

Dr. Harvey K. Meyer, Chief Advisor for the university staff, arrived in Managua on March 8, 1955. He found a friendly people who, almost overnight, had traded the horse and buggy for the modern automobile, the outdoor fireplace for the electric stove. A boom in the economy brought radios and refrigerators to Nicaragua, without the understanding of how to install and service them.

For several years, ICA field staff in Nicaragua had been helping to plan a program to produce the technicians and mechanics so desperately needed. Several buildings for a school were being constructed in Managua by the Ministry of Education. Many items of basic equipment had been purchased in the United States and were in storage, but still there were no students and no shops.

University staff members went to work with their Nicaraguan counterparts and in three months, the first class of Nicaraguan boys enrolled in the Instituto Nacional Tecnico Vocacional.

During the institute's first full year of operation, about 200 boys began preparation in machine shop, sheet metal and welding, auto mechanics, plumbing, carpentry and electricity. A course in air conditioning and refrigeration was added at the beginning of the second year, with diesel mechanics coming later.

The campus now includes an administration building, two large shop buildings, a dormitory and dining hall, and a classroom building. Facilities already are overcrowded. The shops are impressive—as good or better than many in the United States. University technicians work side-by-side with Nicaraguan instructors helping them develop courses of study, instructional materials, and skills in how to teach. Some of the Nicaraguan staff have been sent to Puerto Rico or the United States for additional training, while an in-service program functions at the school for the staff.

The institute is administered by Nicaraguan staff under the general supervision of Dr. Meyer and Sr. Armando Arguello, of the Ministry of Education. There are problems, of course. Instructors must be recruited from a country which has never known vocational or practical arts education, and there are budget problems as the ministry takes over the financing of the program to an ever-increasing degree.

Students are drawn from towns and villages throughout Nicaragua. Each boy has completed the sixth grade and has indicated some aptitude for the work in which he is enrolled. Students are capable and eager to learn, and the shortage of skilled tradesmen is so acute that graduates are assured of jobs at relatively high wages.

When the University of Florida entered the picture, the pattern for "industrial arts" already had been established. It included cooking, sewing, and weaving for the girls and woodwork, electricity, and ceramics for the boys. There were five industrial arts centers in or near Managua, serving about 1,000 youngsters.

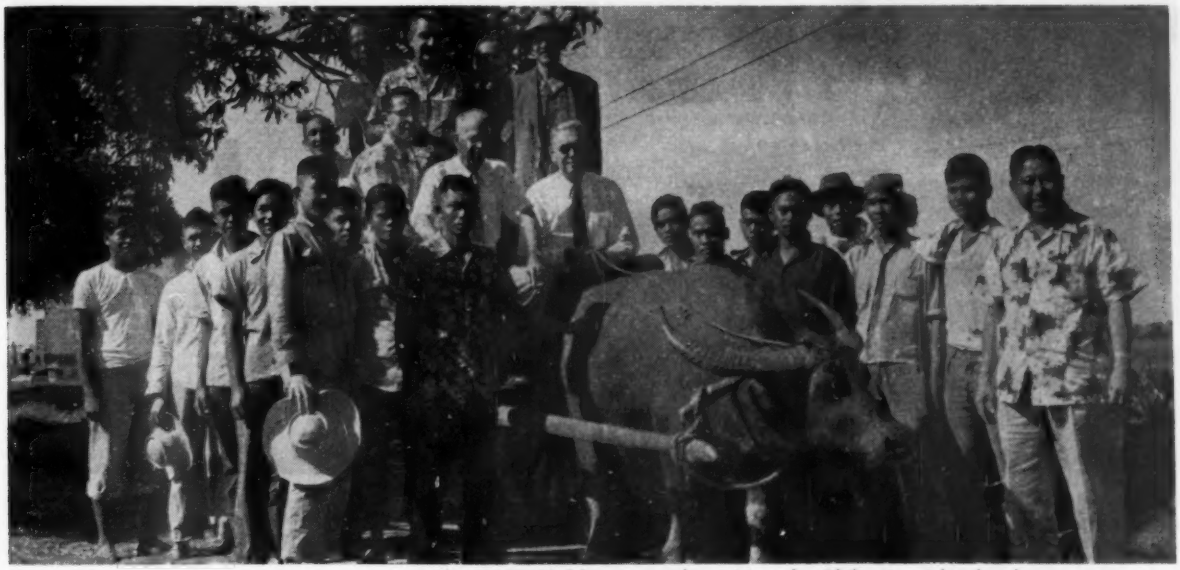
Today, industrial arts programs are operating in every major population center in Nicaragua and about 5,000 children are enrolled. This is a large number—in Nicaragua.

Industrial arts is offered to boys and girls of the fifth and sixth grades, since compulsory education ends with the sixth year. Only a handful of students continue high school to prepare for college. Since it is impossible to finance shops for all small schools, industrial arts "centers" have been established, each serving a number of schools in an area.

Improvements will be made gradually. The program for boys will evolve into a general shop approach, and will serve as a "testing ground" for those who wish to continue technical education.

The university is well satisfied with its contribution to the good-neighbor policy in Nicaragua. Here is a nation of eager, friendly people trying in a short time to span the centuries between the medieval era and 1957. Almost overnight, they have been introduced to the many gadgets of mid-twentieth century. Six or seven years ago, Managuan taxicabs were drawn by horses; today, the taxis have gasoline engines and loud horns. Telephones, air conditioning units, refrigerators, tractors, radios—all these have descended upon a country which has hitherto relied upon hands, strong backs, and oxen. There is little wonder, then, that there is such crying need for mechanics and technicians. The humble industrial arts program and the vocational institute may well prove to be important instruments in raising the living standards of a people who are raising their sights through public education.

—With Vocational Education



Dr. M. D. Mobley, recently visiting the Philippine Islands, demonstrates to student farmers at The Central Luzon Agricultural College that he is proficient in carabao driving. He is accompanied by Dr. Eldridge Plowden, ICA Industrial Vocational Trades, Bangkok, Thailand, Dr. Wilbur Ball, ICA Stanford Contract (Agri. Engr.) CLAC, Mr. Constantino Derecho, Principal, CLAC, Harold L. Kugler, Agri. Educationist, ICA/Manila, Larry Santos, Voc. Educ. Div., B.P.S., Manila and Gene Liebendorfer, Trade Educationist, ICA, Manila, and CLAC President Arcadio G. Matela.

Pittsburgh High School Offers Course in Automation

A course in automation, incorporating a revolutionary change from the more conventional teaching techniques of the "study, do and see" principles of learning, was launched last fall in Pittsburgh's Allegheny High School.

This pioneer course in Automation, which was developed by the trade and industrial department of Pittsburgh's public schools, bases its philosophy on a "see, then do, then study" learning concept. Many educators and industrialists feel that this course may serve as a pilot move in what could become a nationwide development in education.

Established under the premise that automation in American industry and industrial chemistry has opened new fields of opportunity for high school graduates, the course is offered to those senior students who have acquired the necessary technical knowledge and skills related to these fields and who have no assurance of attending college immediately upon their graduation. Qualified students who complete the course, with specialization in instrumentation, industrial chemistry or electronics, do, however, meet college entrance requirements.

Sixty-six twelfth grade boys having better-than-average ability in mathematics and science are currently spending a half of each day studying this latest scientific field —automation—under a specially designed program. Each student spends the other half of his school day pursuing the regular courses required for graduation.

Although the course has enrolled only seniors during the initial phase of the program, it will eventually be extended to include tenth and eleventh grades as well.

Upon completing the course in Automation, each student will be a trained technician of the type so vitally needed by modern industry. He will be free to take a job or to go on to a college education in engineering or science as his finances and choice may direct.

Modern recording devices—potentiometers, radar, thermocouples, pyrometers, gauges, univacs—and almost every other latest innovation in the automation field—will be seen, used and studied by the students.

Local industries and scientific societies by the dozens are cooperating with the school district by providing money, counsel, and the latest in machines and equipment for this specialized training.—ROBERT T. STONER, Pennsylvania State Director of Vocational Education.

Dr. Mobley discusses vegetable raising with a student farmer on the campus of Central Luzon Agricultural College. This student is one of 1,800 enrolled in the secondary school where students "learn by doing." President Matela of CLAC (center) also participates in the chat.

NEA Will Ask Congress for $4½ Billion Federal Aid

A broad, long range four and a half billion dollar program of federal support for public schools is urged by the NEA, as the main plank in its 1958 legislative proposals for consideration by Congress.

The new long range program of almost five billion dollars contrasts with the 300 million dollar federal aid bill the NEA supported last year.

Beginning federal contributions of not less than $25 per school age child were urged with a steady increase to at least $100 a child in five years. The current average over-all expenditure per school age child in the nation is $332.

The Commission also urged strengthening all aspects of the various state departments of education. "This will be one more assurance that the instructional program can't be dictated to states and communities from any higher level," James McCaskill, NEA legislative chief, said.

The report also requested continuation of federal assistance "for such well-established and clearly useful programs as vocational education, library services, school lunches, and aid to federally-affected areas."

Around the Nation—

Sears-Roebuck Foundation officials pose with Dr. M. D. Mobley and AVA Citation: l. to r.: Theodore V. Houser, Chairman of the Board; Robert C. Pebworth, Vice President; R. V. Mullen, Executive Director; S. W. Pettigrew, Vice President; A. L. Jones, Vice President; Dr. Mobley; J. C. Haynes, Vice President; W. F. McCurdy, Vice President; and C. T. Johnson, representative. At r.: Dr. Mobley, Mr. Houser, and James C. Worthy, Sears Vice President for Public Relations.

AVA Presents Sears-Roebuck Foundation Award

Chicago, Dec. 10—At a meeting presided over by James C. Worthy, Vice President in charge of Public Relations, T. V. Houser, Chairman of the Board of The Sears-Roebuck Foundation and Chairman of the Board of the Sears-Roebuck Company, accepted the American Vocational Association's Citation for distinguished service in behalf of The Sears-Roebuck Foundation here today.

Only six persons have been honored with AVA's coveted Citation since the organization was founded in 1906.

The Sears-Roebuck Foundation, a nonprofit corporation organized and endowed by the Sears-Roebuck Company to "aid in the economic and social improvement of the American community" is the first organization to receive it.

Dr. M. D. Mobley, Executive Secretary, made the official presentation.

"It is difficult to appraise and certainly beyond the realm of the imagination to realize how many families and communities have achieved a better way of life as a result of the far-flung activities of this humanitarian organization, The Sears-Roebuck Foundation," he said.

"While the Foundation sponsors more than 3,000 separate projects that reach practically every county in the nation, the AVA is honoring it specifically for major contributions to the agricultural education, home economics education and distributive education phases of our nation's public school vocational program.

"Several motion picture films that promote the work of the Future Farmers of America and the vocational agricultural program have been produced by the Foundation and viewed by millions.

"In addition, it has sponsored livestock projects with local and state FFA organizations since the mid-thirties that, at last count, totaled more than 1,700.

"Since 1947, The Sears-Roebuck Foundation has contributed $10,000 annually to the Future Farmers of America Foundation, and it has awarded more than 14,000 agricultural college scholarships in the past 20 years."

The Foundation has also sponsored scholarships in home economics education at all land-grant colleges. Many of the 1,700 recipients are now vocational homemaking teachers. Home economics projects, initiated by the Foundation chiefly in the Pacific Coast states, have included refurnishing rooms for school and PTA use, setting up nursery and pre-school programs, and demonstrations. In some states the Foundation grants recognition awards to FHA chapters.

In distributive education, the Foundation has been a prominent backer. Classroom equipment has been purchased to produce more realistic selling situations; awards programs for students and communities have been established; and the Distributive Education Clubs of America, national organization for more than 12,000 high school students, has been given large, annual contributions.

Speaking for the Foundation, R. V. Mullen, Executive Director, said:

"We are indeed honored to have this Citation of commendation from the American Vocational Association. It has been a real pleasure to work with AVA officials through the years and to witness the dedicated service of its members to the millions of youth and adults who have 'learned to earn' in America's vocational school programs.

"Theodore V. Houser, Chairman of the Board of The Sears-Roebuck Foundation, has said 'It is the responsibility of every citizen who shares the benefits of democracy to invest his time and effort in projects that will help to make his community a better place in which to live.'

"Through support of our nation's vocational program, we believe the Foundation has made an especially sound investment that will reap extra, precious dividends in the protection and extension of social and economic security for all of the people."

The Sears-Roebuck Foundation was established in 1923 under the name "Sears Agricultural Foundation." Its objective was to help the farmer strengthen community life and develop agricultural practices through a reliable information service.

As the years passed and the American population became predominantly urban rather than rural, the Foundation has expanded into other areas of service.

Dr. Mobley's Words Go 'Round the World

The International Cooperation Administration recently sent the following airgram around the world, enclosing Dr. M. D. Mobley's editorial *(Latest Word from Pakistan)* that appeared in the December, 1957 AMERICAN VOCATIONAL JOURNAL.

"Dr. Mobley returned from his consultation in Pakistan with a highly favorable report on the ICA program and officers in that country. His editorial in the December 1957 issue of the AMERICAN VOCATIONAL JOURNAL is forwarded herewith.

"ICA/W is requesting the American Vocational Association to send extra copies of the December issue and these will be forwarded to USOM on their receipt in ICA/W. He makes several thoughtful comments as to the type of Education now being carried on in Pakistan and the direction which efforts for improvement should take. His article concludes as follows:

" 'My experiences in the last few weeks have made me see more clearly than ever before the greatness of America and the important role vocational and technical education has played in its development'."

OSCARS

American Technical Society Honors Six Men as Research Awards Winners

John Fuzak wins $1,000

By
W. K. LASHER

The inauguration, in 1956, of a concerted effort by national, state, and local organizations to stimulate and improve research in education was of great interest to the American Technical Society—especially since research had played such an important part in our own program for many years.

Sixty years ago, when our organization was founded, it was faced with the problem of providing instructional material in a field where practically no material had been published. Many job analyses were made, and book content was determined only by thorough investigation and research. This research and investigation has been continued throughout the years with tangible benefits to both education and publishing.

Under the direction of our Editor in Chief, W. Rahy Paul, we developed and submitted a Program of Research Awards to the Research Committee of the American Vocational Association at their 1956 Convention. The Research Committee recommendation resulted in an approval by the Executive Committee of AVA and in our inauguration of the program.

Throughout this entire program the American Technical Society has acted in a strictly administrative capacity. But it has been a pleasure to observe the enthusiasm and energy with which our Editorial Advisory Board of prominent educators and their special advisors have labored over the evaluation of entries. Equally gratifying were the reports of the Judges which indicated that we are developing an increasing number of educators in vocational education, industrial arts, and related fields, who are capable of dealing with research problems competently. This area of education is closely identified with industry, and we are firmly convinced that research can distinguish this educational area as it has distinguished the industries served by your training programs.

We believe that the results of this program will have a strong impact on education. Many of the studies show promise of significantly improving educational practices. Many of them advance new knowledge to be applied in education. And—a fact of great importance—this research program may very well stimulate others to greater activity in educational research.

Should this program be continued? Our decision rests with you.

FIRST AWARD OF $1,000:
THE ROLE OF PHYSICAL MATURATION IN DETERMINING THE ABILITY OF JUNIOR HIGH SCHOOL BOYS TO PERFORM COMPLEX FINGER COORDINATIVE ACTIVITIES AND AN INDEX TO LEVEL OF ABILITY. John A. Fuzak, Professor of Industrial Education, Michigan State University, East Lansing, Michigan.

Evidence shows that junior high school boys vary greatly in their ability to perform complex finger coordinative activities, and that this difference is important in success in junior high school industrial arts courses. Strength of grip, as measured by a simple hand dynomometer, is a valid and reliable indicator of the level of complex finger coordinative ability (or of the level of physical maturity), and therefore of great significance to the junior high school teacher of industrial arts in determining the readiness of pupils to turn out acceptable industrial arts projects. Use of a hand dynomometer is recommended for placement of junior high boys.

AWARD OF MERIT: $200.00
EXPERIMENTAL STUDIES OF THE USE OF AUDIO-VISUAL AIDS IN VOCATIONAL AGRICULTURE. Ralph R. Bentley, Associate Professor of Agricultural Education, Purdue University, West Lafayette, Indiana.

Since 1949 the author has studied the use of audio-visual aids in the teaching of agriculture. Through well-developed experimental procedures, instructional outcomes were compared with and without such aids. There was some evidence that student achievement may be retarded when audio-visual aids merely repeat visual experiences which students have the opportunity to secure through other instructional materials. The aids were found to be effective when they provided new experiences.

AWARD OF MERIT: $200.00
THE EFFECT OF AN ENTRANCE REQUIREMENT ON SUCCESS IN SELECTED ENGINEERING COURSES. John N. Clausen, Instructor, Institute of Technology, University of Minnesota, Minneapolis, Minnesota.

Using a sophisticated experimental design, examination was made of the advisability of an entrance requirement in solid geometry for the College of Engineering in the University of Minnesota. Outcomes suggested that with the present University curriculum, the requirement should be retained, although the course should also be

W. K. Lasher, ATS President

taught in the College of Engineering for those students who have had no opportunity to take it in high school or who did not do well in the high school course.

AWARD OF MERIT: $200.00
RELATION OF WORK EXPERIENCE IN INDUSTRY TO INDUSTRIAL ARTS TEACHING PRACTICES AND SUCCESS. Thomas R. Gaines, Professor of Industrial Arts, Central Missouri State College, Warrensburg, Missouri.

This study of certain aspects of the effect of work experience on the success of Industrial Arts teachers shows that teacher training institutions should not consider such training as a substitute for their training in the basic skills, desirable habits, attitudes, and appreciations necessary for successful teaching.

AWARD OF MERIT: $200.00
THE OPERATIONAL DEFINITION AND MEASUREMENT OF EDUCATIONAL PHILOSOPHY. Robert S. Swanson, Associate Professor, Industrial Education, Stout State College, Menomonie, Wisconsin.

An operational definition of educational philosophy was proposed by listing teacher behaviors implicit in educational philosophy. The major headings listed five general activities in which teachers engage during the teaching process; in each of the five areas behaviors characteristic of two viewpoints, the progressive and the essentialist, were listed. The operational definitions were presented to a jury for evaluation and revision. Using these data, an instrument, an *INVENTORY OF VIEWPOINTS ON EDUCATION* was prepared to measure the extremeness and emphasis of a teacher's educational viewpoints. Reliability of the instrument was .70. It was administered to groups of teachers and comparisons were made between philosophy and degrees, teaching level and experience.

AWARD OF MERIT: $200.00
TECHNICAL OFFERINGS FOR INDUSTRIAL ARTS TEACHERS AT THE GRADUATE LEVEL. Ray A. Wigen, Director of Graduate Studies, Stout State College, Menomonie, Wisconsin.

An important area for investigation is isolated and competently studied. One of the outcomes is the production of an administrator's guide for evaluating and developing technical offerings at the Master's degree level. The guide was found to be effective by experienced educators.

New Books—

Building Trades Blueprint Reading, by J. Ralph Dalzell. American Technical Society, 848 East 58th St., Chicago, Illinois, 1956. 128 pages.

This is a revision of a book successfully used in the building trades to meet new techniques used in drafting and progress in construction methods to improve opportunities for success in this field.

* * *

Industrial Education in a Changing Democratic Society, by Lynn A. Emerson. New York State School of Industrial and Labor Relations, Cornell University, Ithaca, New York, 1955. 94 pages, 50 cents.

This is a series of papers which point out that vocational education views need to be adapted to a democratic society in which the techniques of production are constantly changing. These articles contain material of interest dating from 1939 to the present.

* * *

Federal Funds for Education, 1954-55 and 1955-56. Office of Education, Department of Health, Education, and Welfare, 1956. Order from U. S. Government Printing Office, Washington 25, D. C. 163 pages, 60 cents.

Providing authoritative information, here is the 13th bulletin in a series issued in response to a continuing interest in federal funds appropriated or allotted for educational service.

* * *

The Art of Painting, by Leonardo da Vinci. Philosophical Library, 15 East 40th St., New York 16, N. Y., 1957. 224 pages, $4.75.

This treatise from notebooks of Leonardo da Vinci is an acknowledged milestone in the history of art. The artist recorded scientifically his discoveries and solutions to artistic problems in notes that will appeal even to those who do not actually practice painting.

* * *

Pocket Encyclopedia of Music, by Harry Dexter and Raymond Tobin. Philosophical Library, 15 East 40th St., New York 16, N. Y., 1957. 160 pages, $2.75.

For the average listener or music lover, this treasury of musical information gives all the basic facts necessary to understand the world's great music.

* * *

A Guide for Games, compiled by D. Cyril Johnson. Philosophical Library, 15 East 40th St, New York 16, N. Y., 1957. 302 pages, $7.50.

Here is a useful reference that decribes about 1,000 games.

* * *

Consumer Problems and Personal Finance, by Arch W. Troelstrup. McGraw-Hill Book Co., Inc., 330 West 42nd St., New York 36, N. Y., 1957. 511 pages, $6.

Designed for college students and adults, this work employs material from psychology, economics, nutrition, government and other fields. The text begins with a student in college and takes him through life.

Money Management, Your Shelter Dollar. The Money Management Institute of Household Finance Corporation, Prudential Plaza, Chicago 1, Ill., 1957 36 pages, 10 cents.

A complete guide to planning shelter requirements is given in this booklet, one of a series dealing with the management of family income. The most recent developments in the housing field are included.

* * *

Masonry Simplified, Vol. II, by J. Ralph Dalzell and Gilbert Townsend. American Technical Society, 848 E. 58th St., Chicago 37, Ill., 1957. 438 pages, $4.95

This revision of a popular text incorporates new developments in the building industry. It is designed for use in apprentice training and vocational education and as a handbook for masons, builders and architects.

* * *

An Experience in Practical Nurse Education. W. K. Kellogg Foundation, 250 Champion St., Battle Creek, Michigan. 63 pages.

This brochure, with an illusion to the Michigan pilot program, is a description of how five southern states used Foundation aid to improve practical nurse training, some of the major problems encountered and interesting recommendations.

* * *

Modern Applied Photography, by G. A. Jones. Philosophical Library, 15 East 40th St., New York 16, N. Y., 1957. 162 pages, $4.75.

This work surveys the scope of applied photography in industry and its value in research and investigation.

* * *

Books about Occupations, A Reading List for High School Students, by Margaret Haggerty Anderson, Oakie Robison Gerakis, and Oscar M. Haugh. The University of Kansas School of Education, Lawrence, Kansas. 49 pages.

Planned to aid the counselor, this list covers many vocational fields. It also includes biographies and a few helpful works of fiction.

* * *

Teaching and Training with Motion Pictures (Magnetic-Sound), Teaching and Training with Tape Recorders, Teaching and Training with Motion Pictures (Optical Sound), Teaching and Training with Filmstrips and Slides. Bell & Howell, 7100 McCormick Rd., Chicago 45, Ill., 1957. 12 pages, approximately.

These pamphlets give helpful information on the use of mechanical teaching aids now available through science.

* * *

Student Personnel Services in Japan, by Wesley P. Lloyd. American Council on Education, 1785 Mass. Ave., N.W., Washington, D. C., 1957. 112 pages.

This is a report of the 1955 Institute for Advanced Training in Student Personnel held at Tokyo University, sponsored by the University, the National Association for Student Personnel Services and the Japanese Ministry of Education, and the American Council on Education with financial support from the Rockefeller Foundation.

* * *

People's Capitalism, by David M. Potter. The Advertising Council, Inc., 25 West 45th St., New York 36, N. Y., 1957. 61 pages, 25 cents.

Digested here are discussions at Yale University in 1956, sponsored by the University and the Advertising Council. Purposes were to examine the American economy, reach a consensus of opinion of outstanding men, clarify public thinking, and stimulate other such discussions in view of widespread misconceptions about America.

* * *

Seafarers and Their Ships, prepared by the Ministry of Transport and Civil Aviation and the Central Office of Information of Great Britain. Philosophical Library, Inc., 15 E. 40th St., New York 16, N. Y., 1956. 98 pages, $3.50.

A century of progress in ship safety and the well-being of seamen is covered here.

* * *

Alternating Current Fundamentals, by Joseph J. DeFrance. Prentice-Hall Inc., Englewood Cliffs, N. J., 1957. 262 pages, $4.50.

This text is the outgrowth of courses given by the author at the U. S. Coast Guard Training Station, Groton, Conn. Pre-requisite to its understanding is a good foundation in direct current principles, including inductance and capacitance.

* * *

The Installation and Servicing of Domestic Oil Burners, by Frank V. Mitchell and Robert W. Mitchell. Arco Publishing Co., 480 Lexington Ave., New York 17, N. Y., 1957. 346 pages, $5.00.

For those who want to become practical mechanics and for the layman who wants to save money, this new work covers the principles of oil burning and features 105 pages of detailed illustrations.

* * *

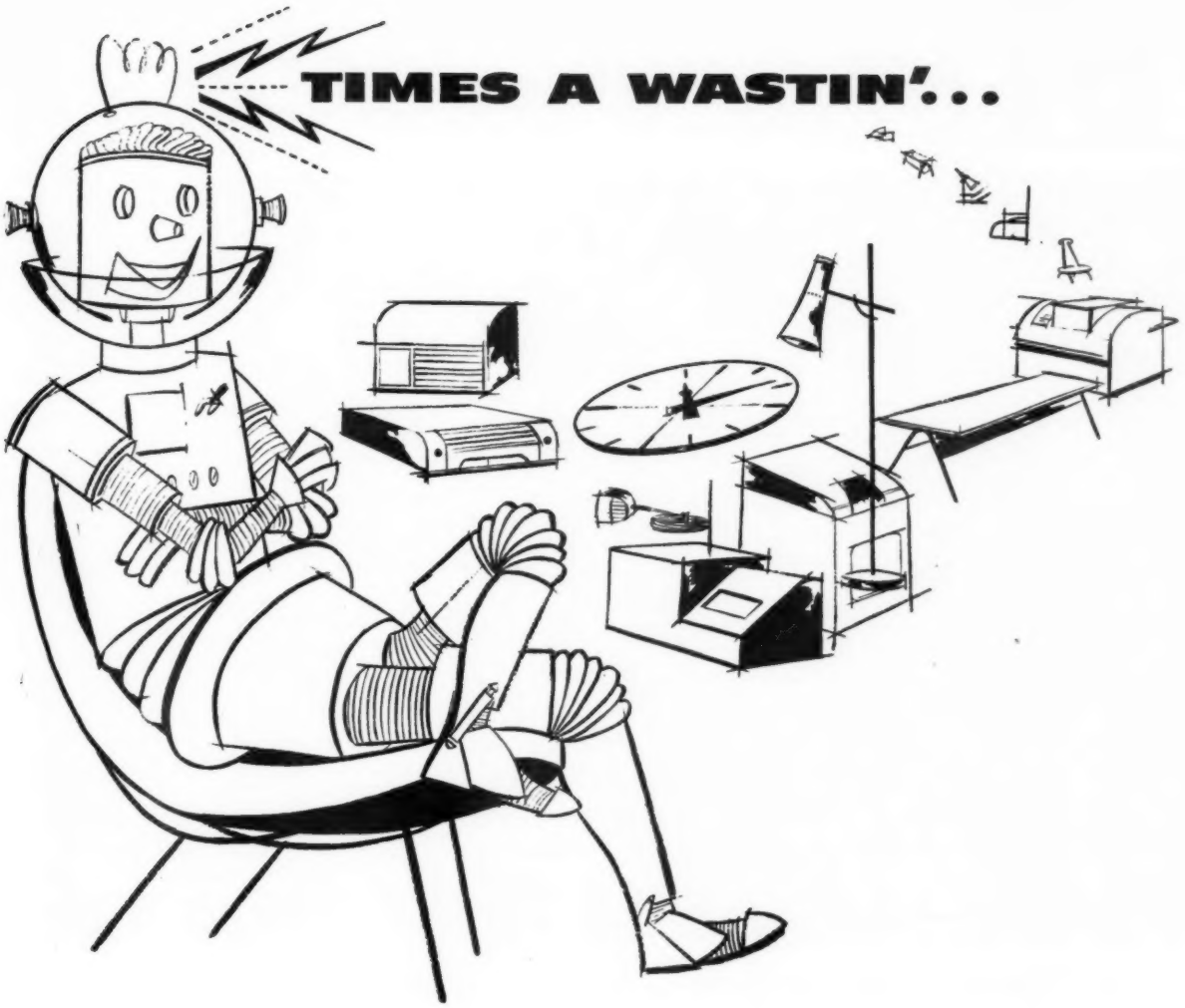
Silk Screen Printing, by James Eisenberg and Francis J. Kafka. McKnight & McKnight Publishing Co., Bloomington, Ill., 1957. 91 pages, $1.50.

This revision includes 195 drawings. Photographs show exactly what to do and how to proceed.

* * *

Accounting Fundamentals, by George A. MacFarland, Robert D. Ayars and Williard E. Stone. McGraw-Hill Book Co., 330 West 42nd St., New York 36, N. Y., 1957. 623 pages, $6.50.

This new edition of a standard teaching aid is devoted primarily to an explanation of the underlying theory of fundamental elements of accounting, providing a sound basis for further study. Technical phrases are clearly defined.



Get those talented students enrolled in FORD iaa right now!

Your students benefit . . . and you benefit through Ford's nationwide Industrial Arts Awards Program.

IAA gives national recognition to students and teachers for achievement in industrial arts. It helps establish local exhibits for local projects . . . offers students a chance to compete for cash prizes on a nationwide basis . . . and for the 32 outstanding award winners *and* their teachers, IAA provides an event-packed, all-expense trip to Detroit.

Virtually any high quality industrial arts or vocational industrial project by students in the 7th through 12th grades can be entered. Send the attached coupon for entry blanks. But do it today . . . entries must be received in Salt Lake City by June 10, or in Dearborn by June 25, 1958.

FORD INDUSTRIAL ARTS AWARDS, Dept. A

INDUSTRIAL ARTS AWARDS FORD MOTOR COMPANY

FORD MOTOR CO., The American Road, Dearborn, Mich.

I would like the official IAA rules booklet and entry blanks.
Please send to:

Name_____

Address_____

City_____ Zone____ State_____

ROCKWELL-BUILT

DELTA 11" metal lathe

..."meets our every requirement—and then some!"

says Mr. Dean Darrow, shop instructor, Port Jefferson High School, Port Jefferson, Long Island, N.Y.

"Safety, performance and economy are the basic requirements we set when we purchase shop equipment," says Mr. Dean Darrow, "and Delta not only meets these requirements, but provides many 'extras'—making Delta our best buy from every angle."

"FOOLPROOF" SAFETY FEATURES—Delta offers the exclusive new four position drive selector which permits students to shift the drive *only after spindle has stopped rotating.* And according to Mr. Darrow, the unique drive selector also eliminates the need for opening the guard or pulling pins to change drives—providing extra protection for students.

EASY TO LEARN, OPERATE—"Simplicity of design makes the Delta 11" Metal Lathe easy to teach, to learn and to operate," says Mr. Darrow.

INDUSTRIAL QUALITY—Mr. Darrow adds, "You get genuine industrial quality with the Delta 11" Metal Lathe. That means high performance standards under continuous student operation.

GET ALL THE FACTS—See Delta's entire 11" Metal Lathe line. Choose either threaded spindle nose or tapered key drive spindle nose at *no extra cost.* See how new production accessories convert your Delta engine lathe into an efficient production machine at low cost. Your Delta Dealer is listed under "TOOLS" in the Yellow Pages.

Send Coupon For All The Facts!

another product by

ROCKWELL

DELTA . . . PRIDE OF THE NATION'S SCHOOLS

Delta Power Tool Division, Rockwell Manufacturing Co.
414-A N. Lexington Ave., Pittsburgh 8, Pa.

Please send:

- ☐ Catalog on Delta 4" and 5" Metal Cutting Lathes and accessories.
- ☐ Fact book: Delta Power Tools Teamed with Machine Tools.
- ☐ Names of nearest Delta Dealers.

Name_____ Title_____

School_____

Address_____

City_____ County_____ State_____